

FIG. 1A

000000 998888560

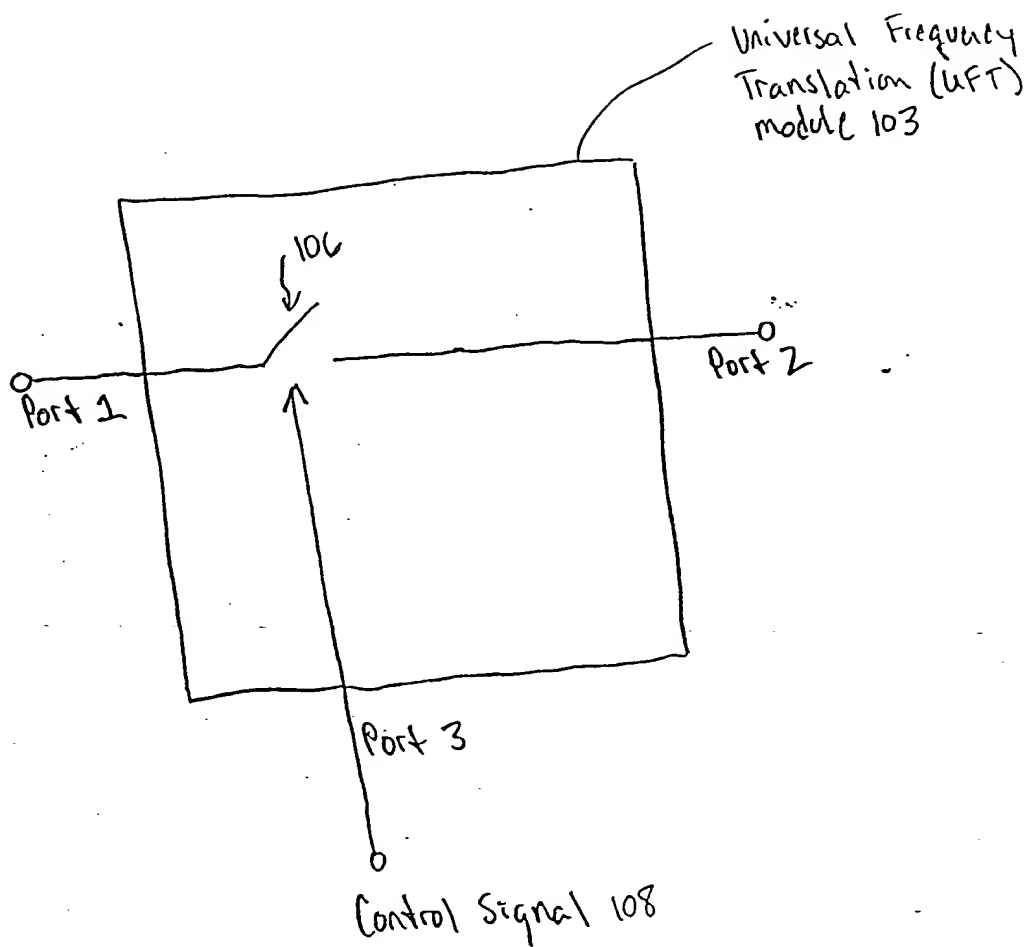


FIG. 1B

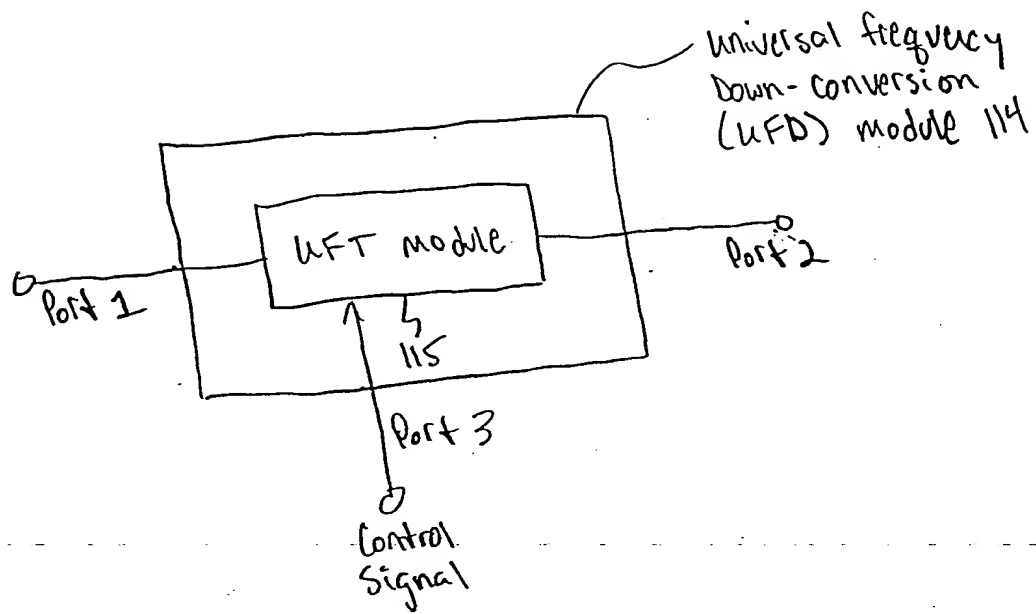


FIG. 1C

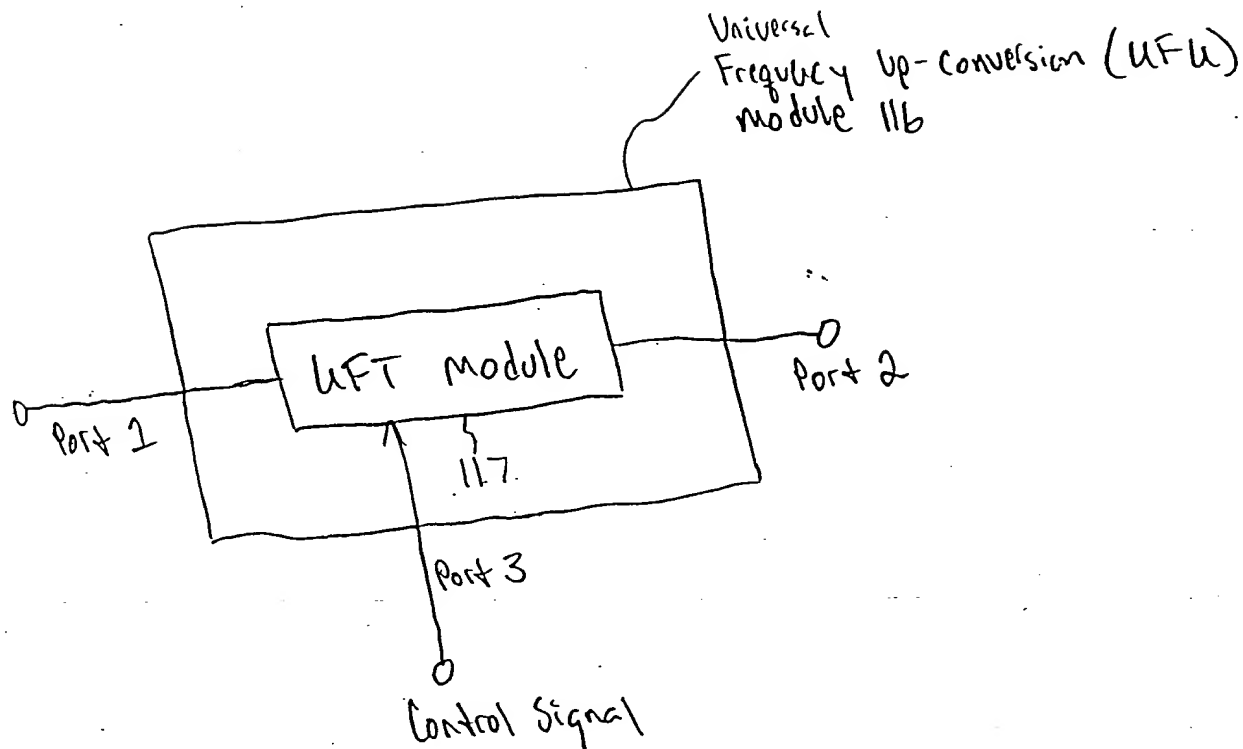
[illegible]

FIG. 1D

000000 55555500

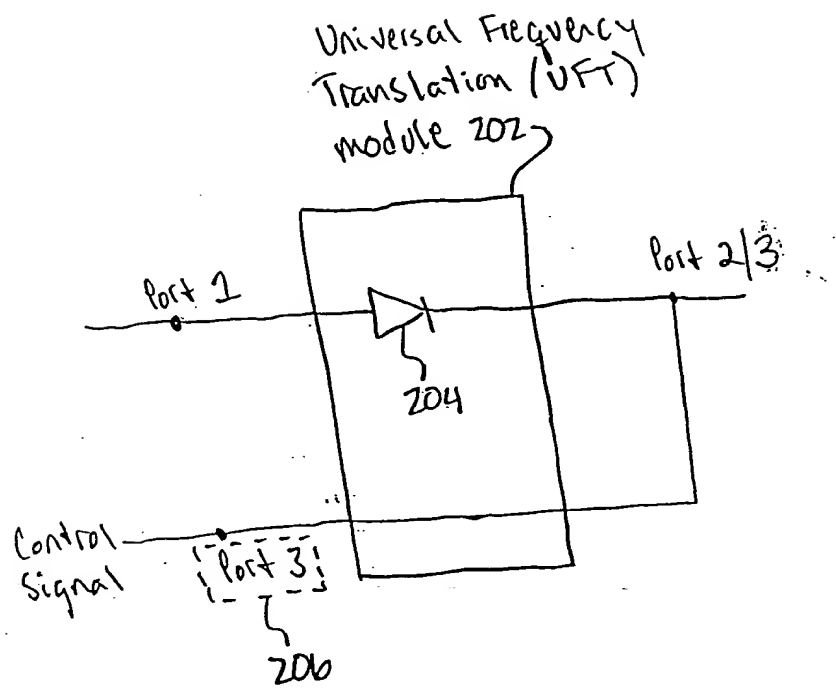


FIG. 2A

2.

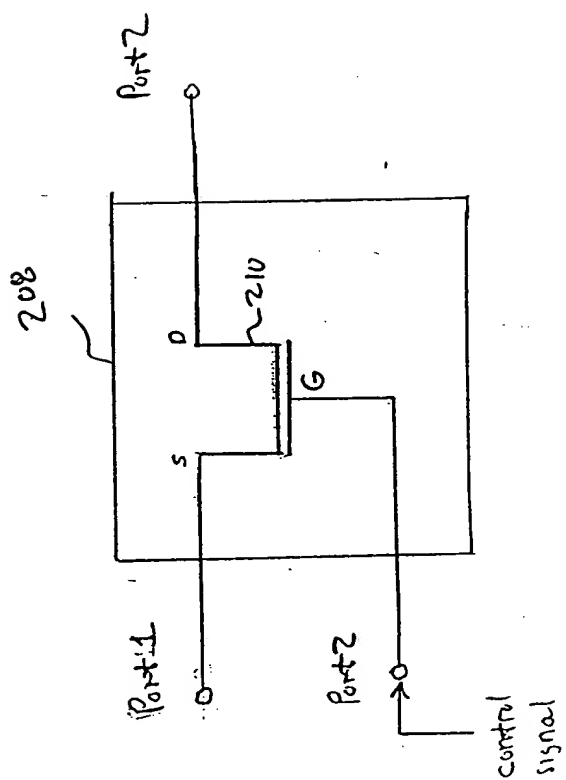
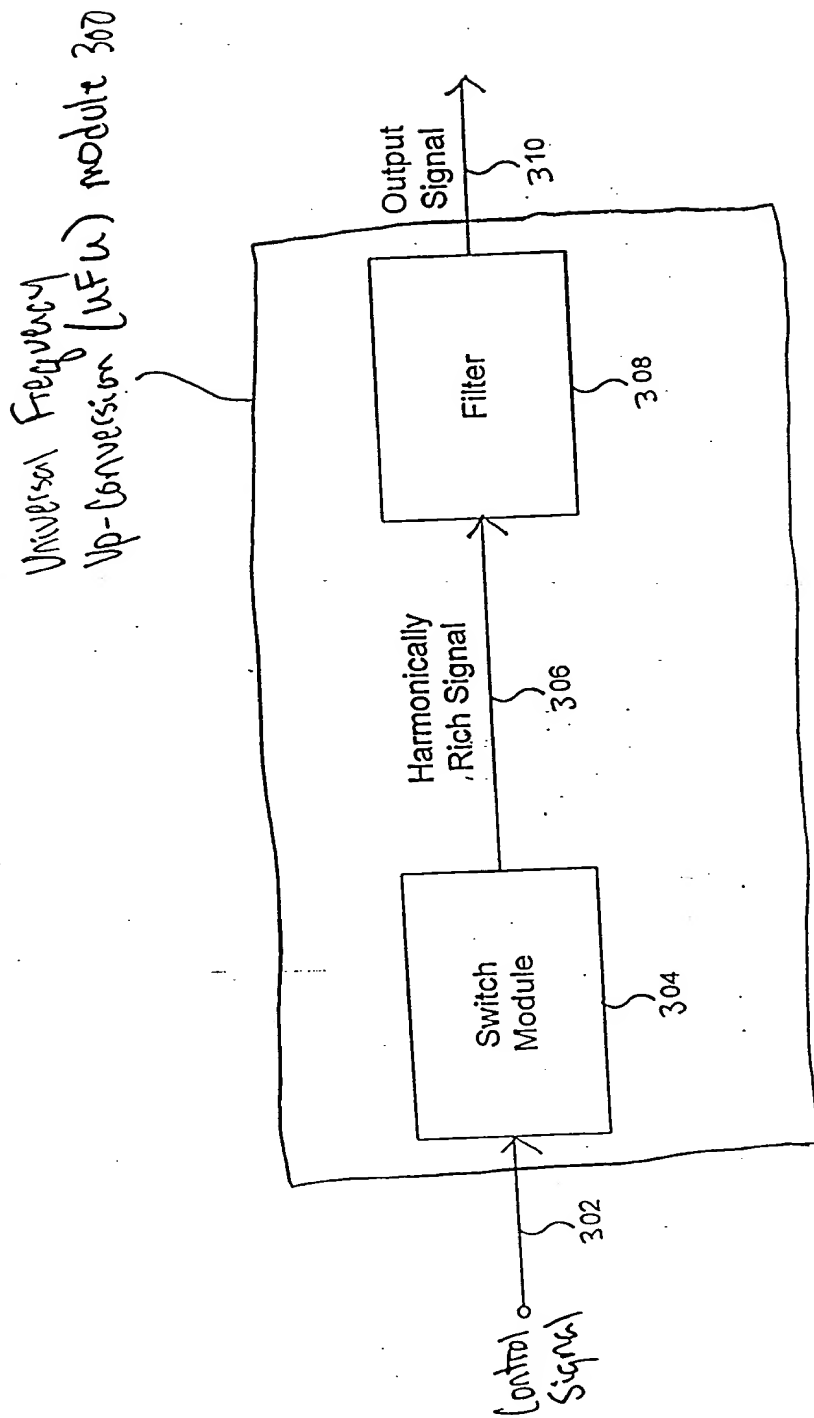


Fig. 2B

M



Universal Frequency  
Up-conversion (UFC) module 401

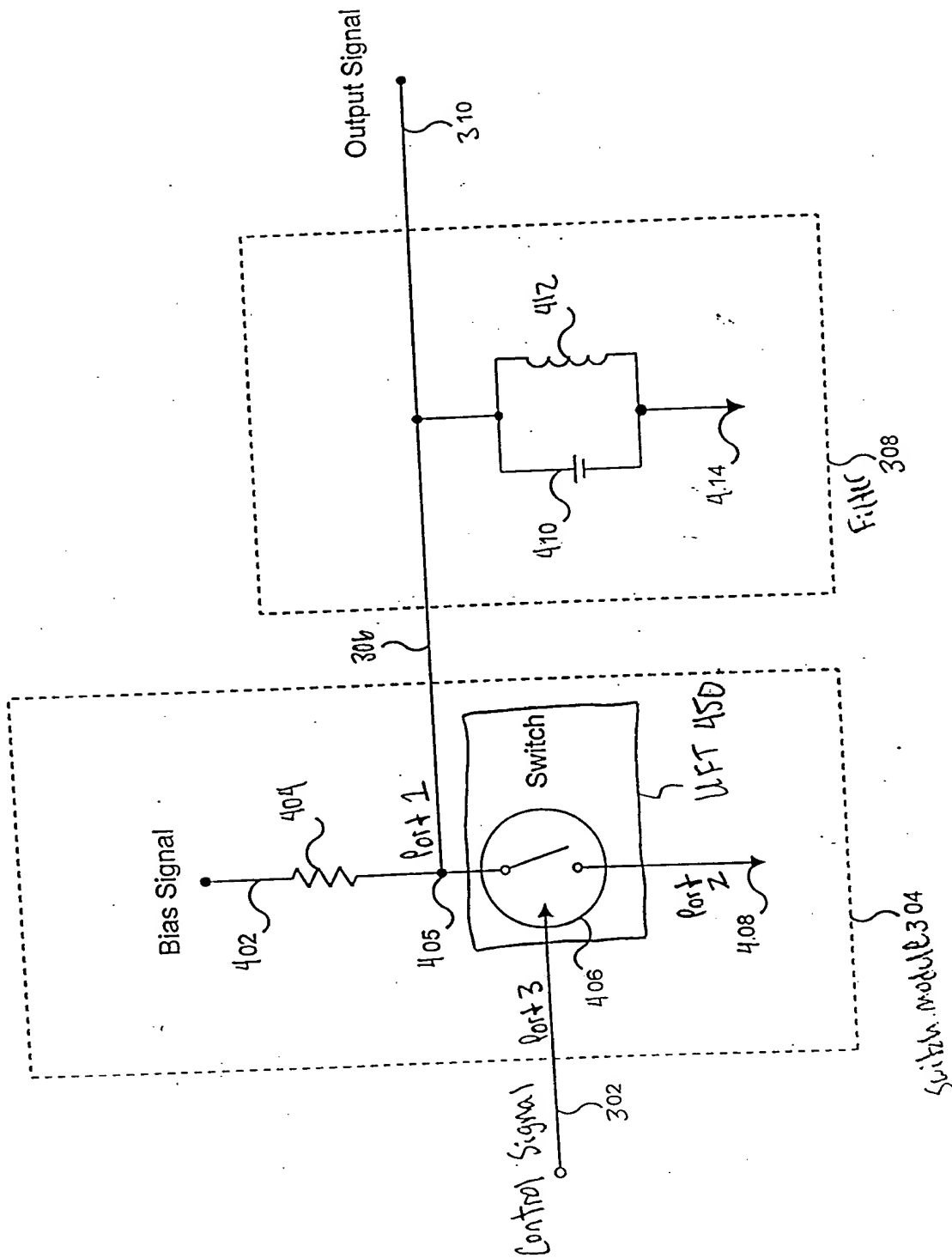


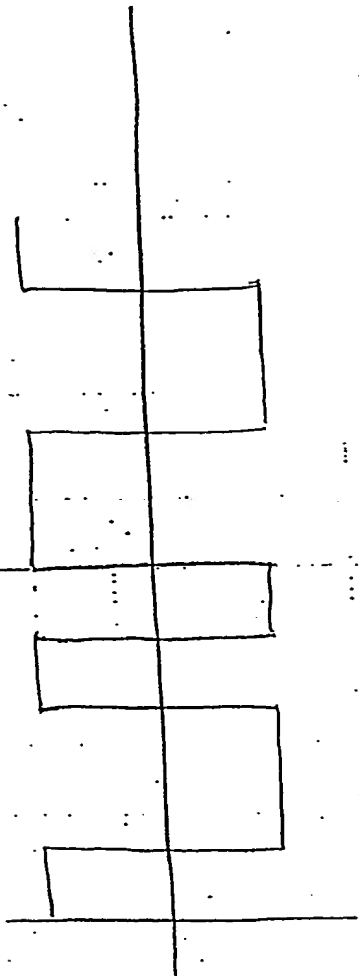
FIG. 4





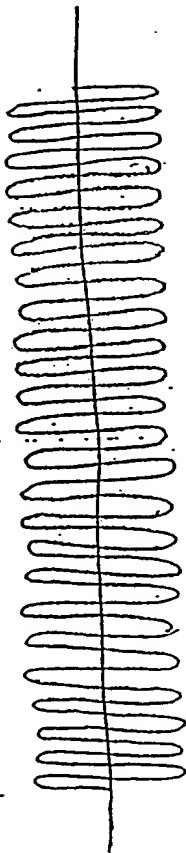
9809-02.vsd/48

FIG. 6A



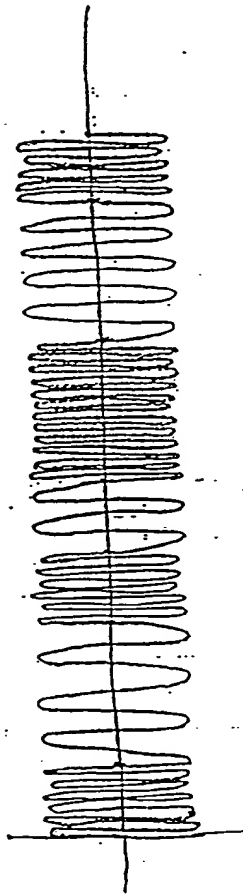
INFORMATION  
SIGNAL  
602

FIG. 6B



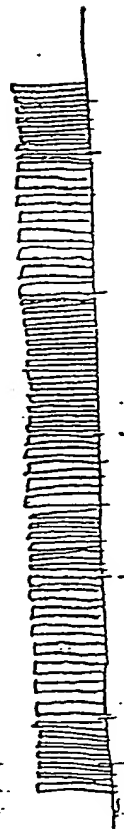
OSCILLATING  
SIGNAL  
604

FIG. 6C



FREQUENCY MODULATED  
INPUT SIGNAL  
606

FIG. 6D



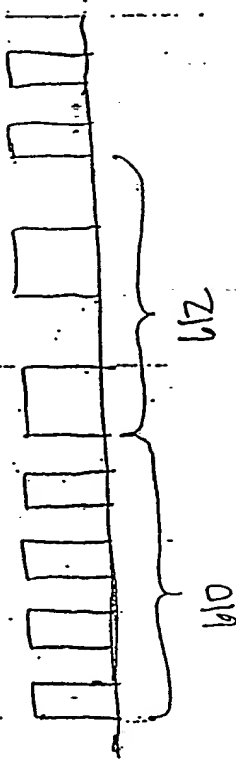
HARMONICALLY  
RICH SIGNAL  
(SHOWN AS SQUARE WAVE)  
608

SEE FIG. 1E

FIG. 6

EXPANDED VIEW OF  
HARMONICALLY RICH  
SIGNAL 608

FIG. 6E



SEE FIG. 6G

SEE FIG. 6F

HARMONICS OF  
SIGNAL 610  
(SHOWN SEPARATELY)

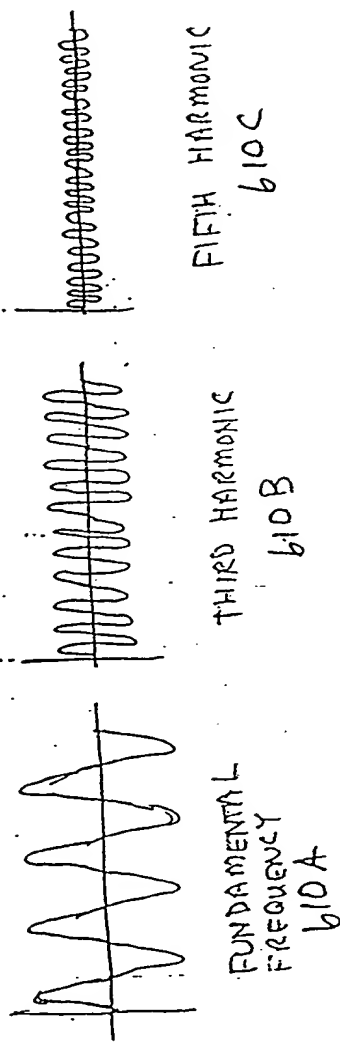


FIG. 6F

HARMONICS OF  
SIGNAL 612  
(SHOWN SEPARATELY)

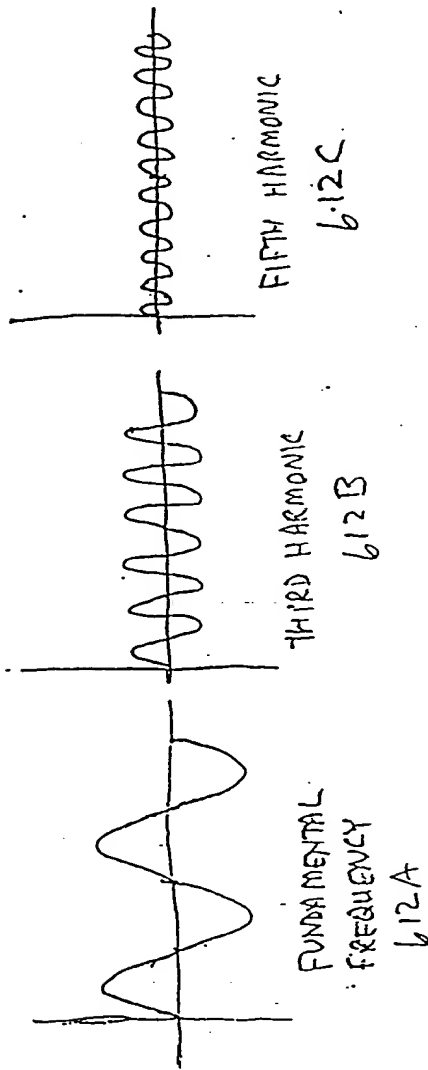


FIG. 6G

FIG. 6 (cont.)

m

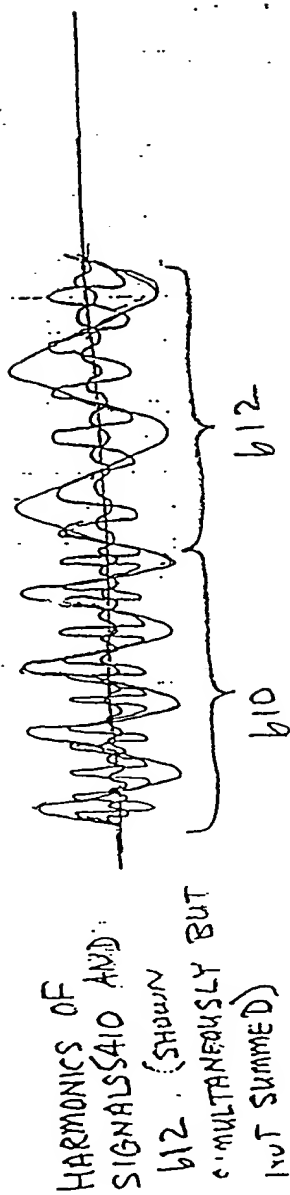


FIG 6H

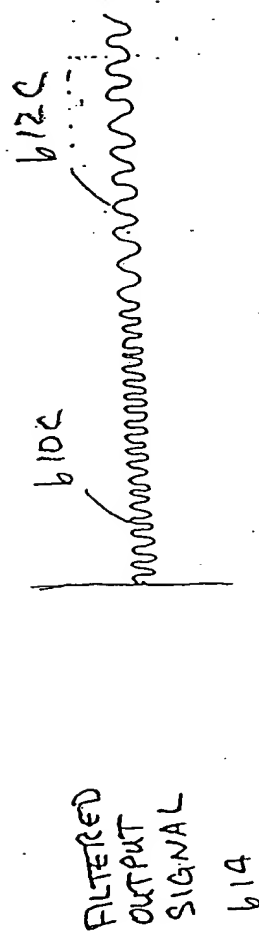


FIG. 6I

FIG 6 (cont)

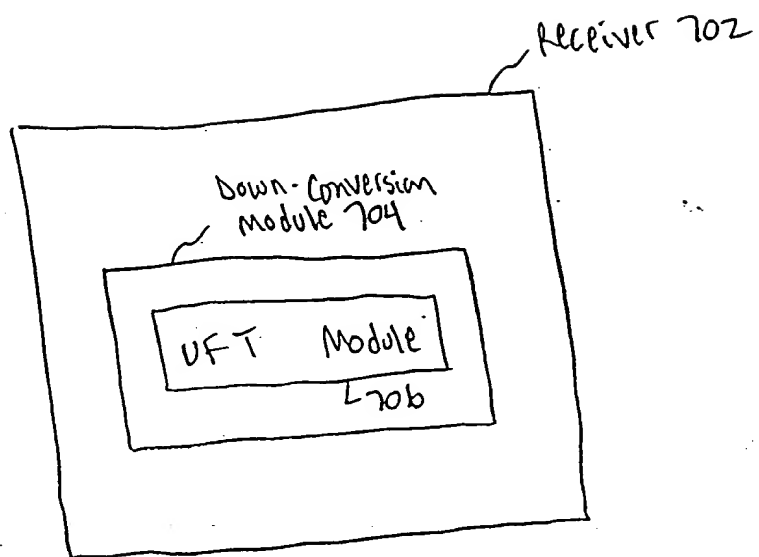


FIG. 7

00000-5522500

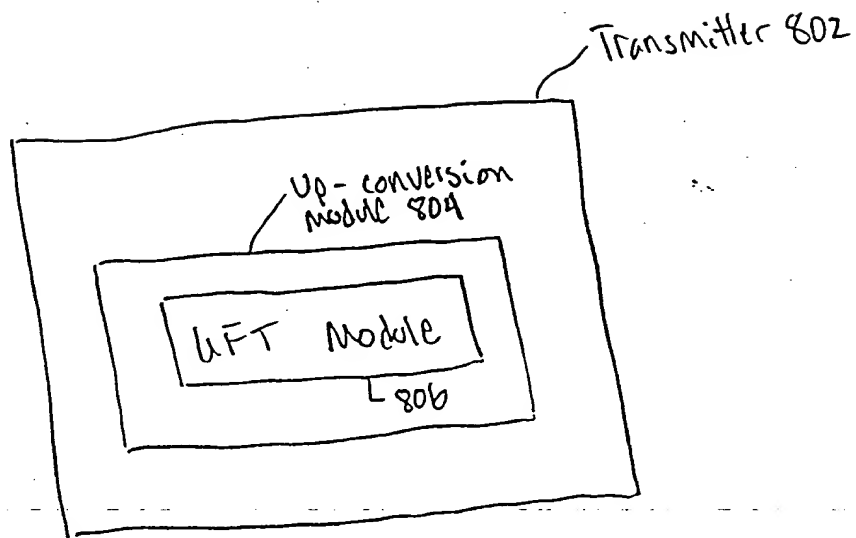


FIG. 8

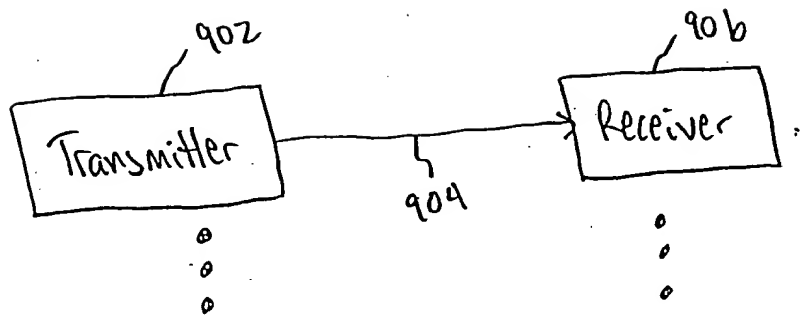
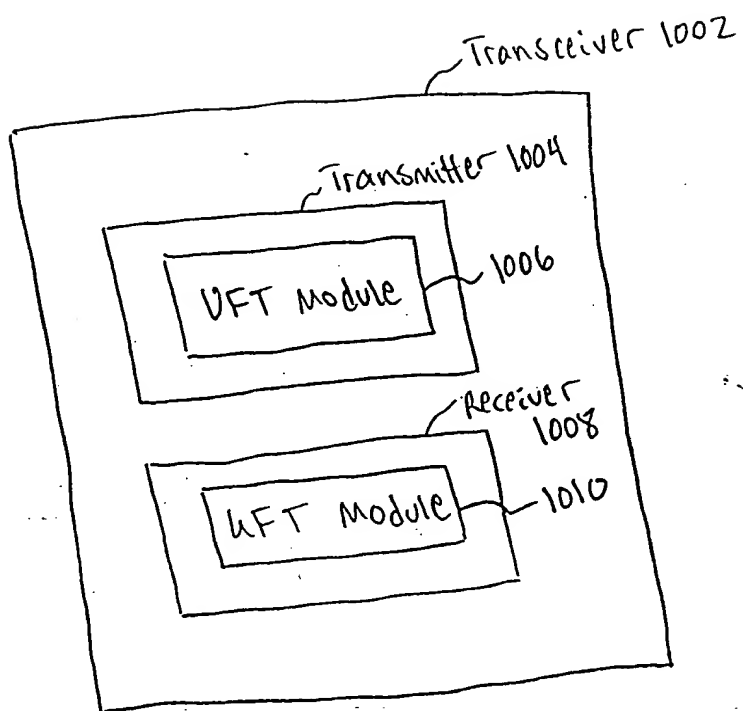


FIG. 9





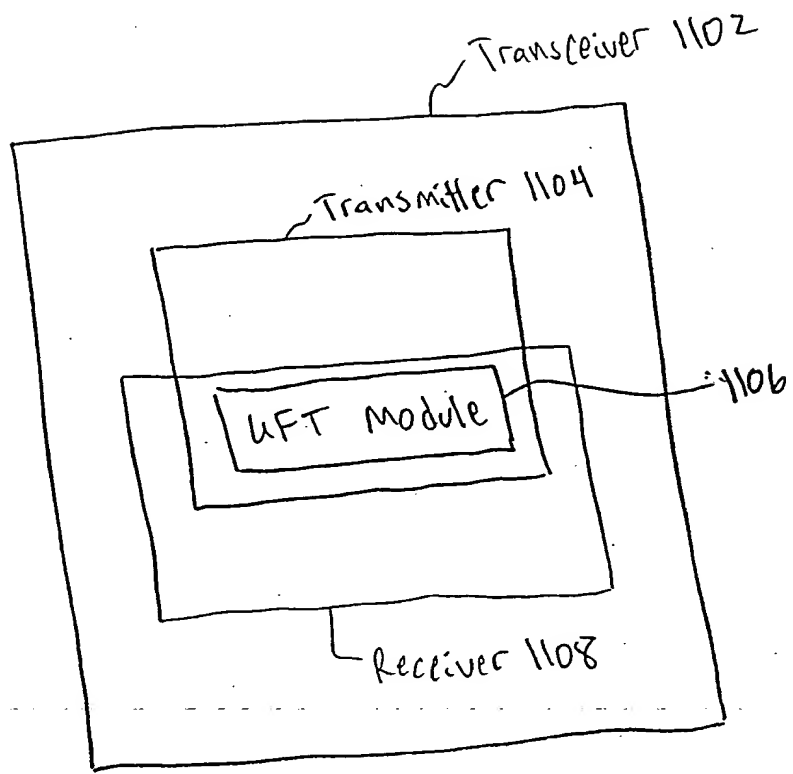


FIG. 11

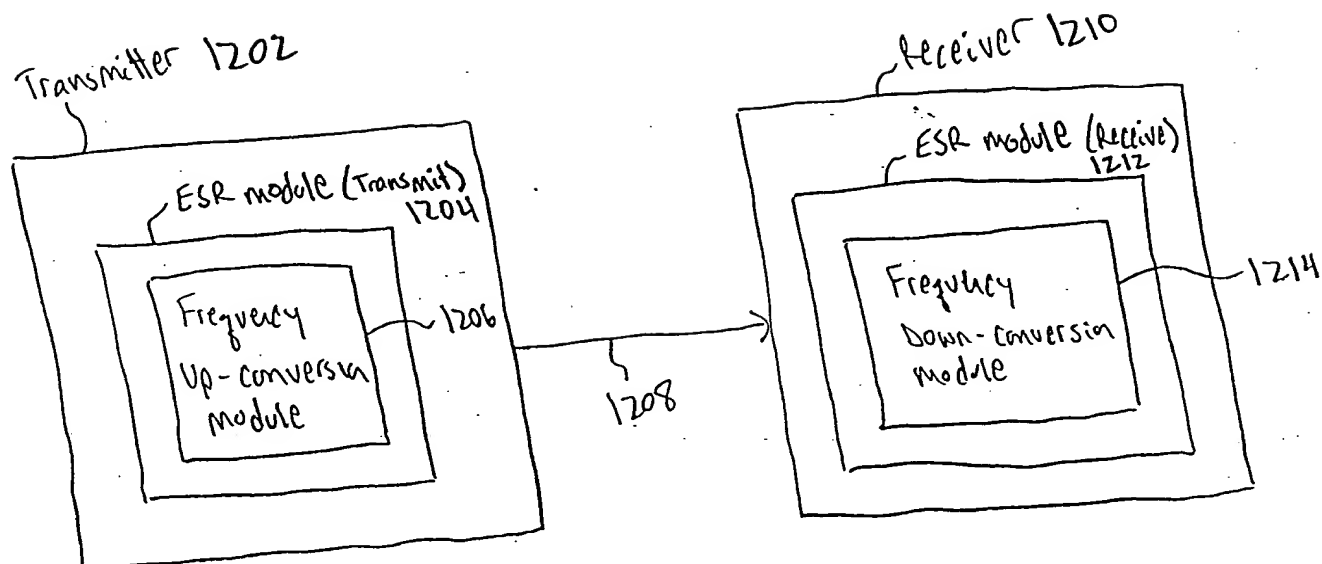


FIG. 12

000000 99822560

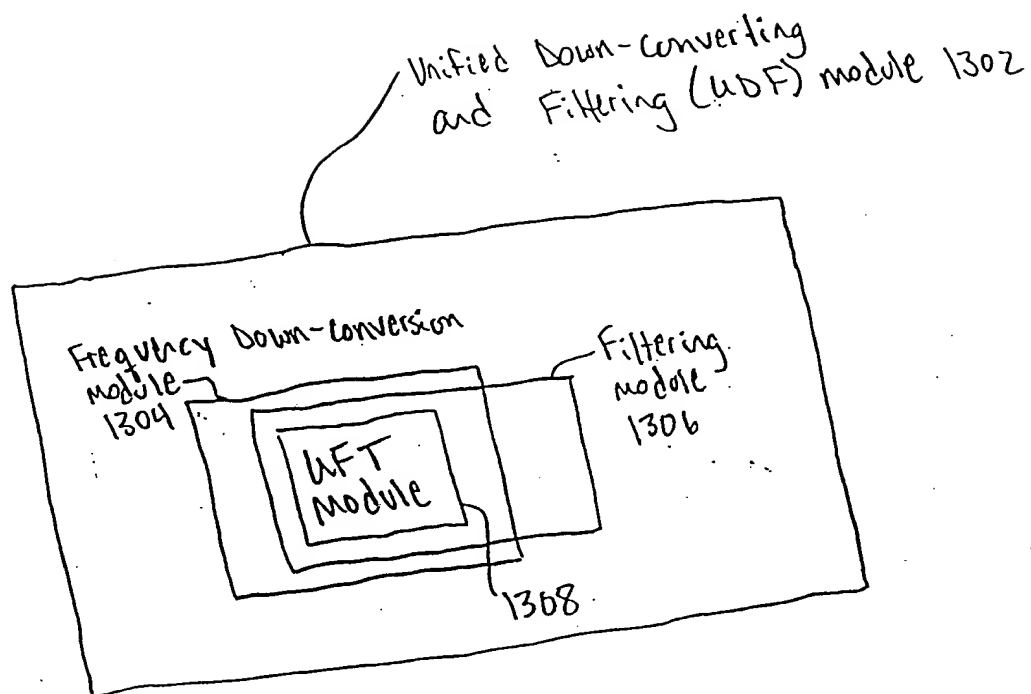


FIG. 13

m



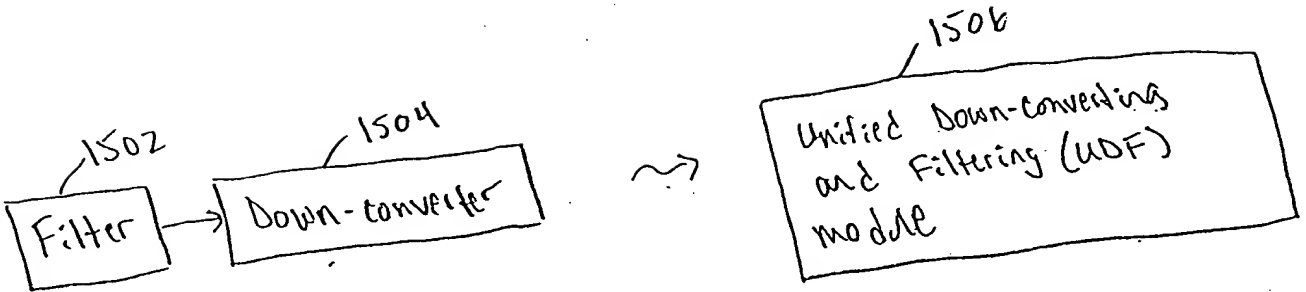


FIG. 15A

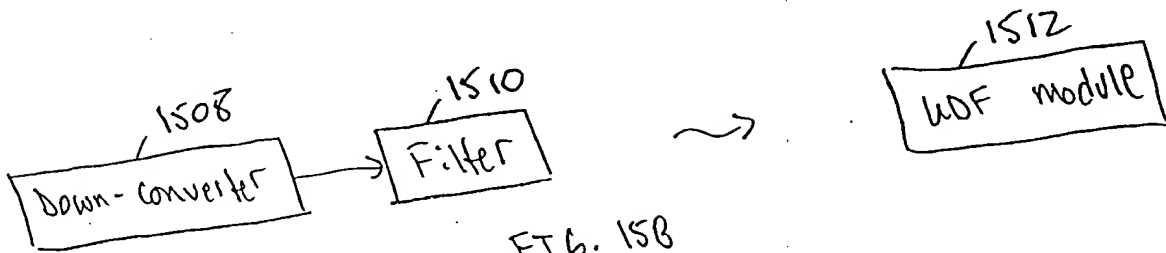


FIG. 15B

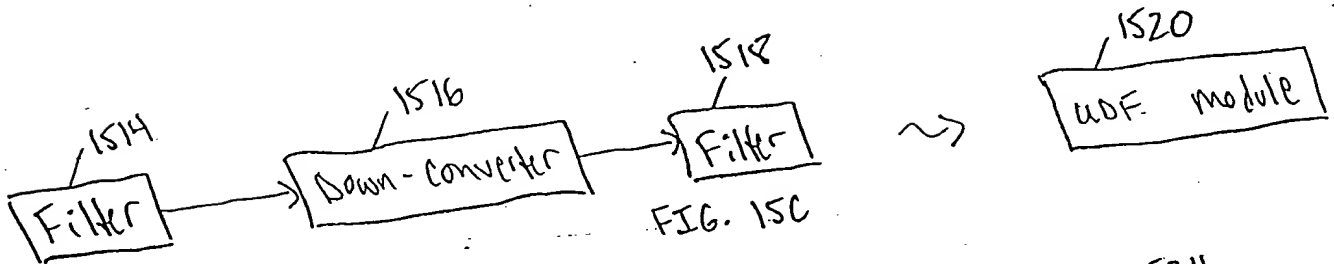


FIG. 15C

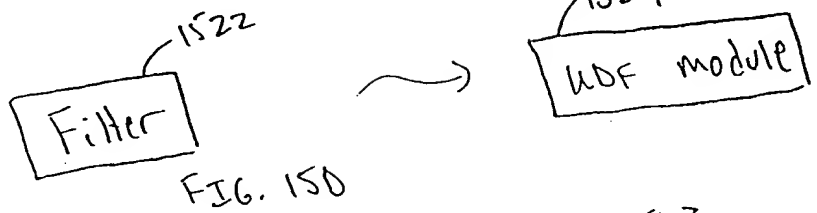


FIG. 15D

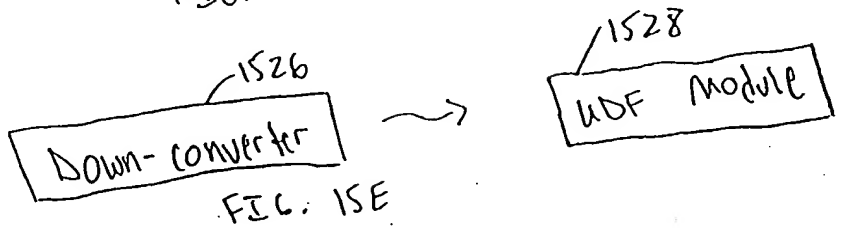


FIG. 15E

1530  
Amplifier

—

1532

WDF Module

FIG. 15F



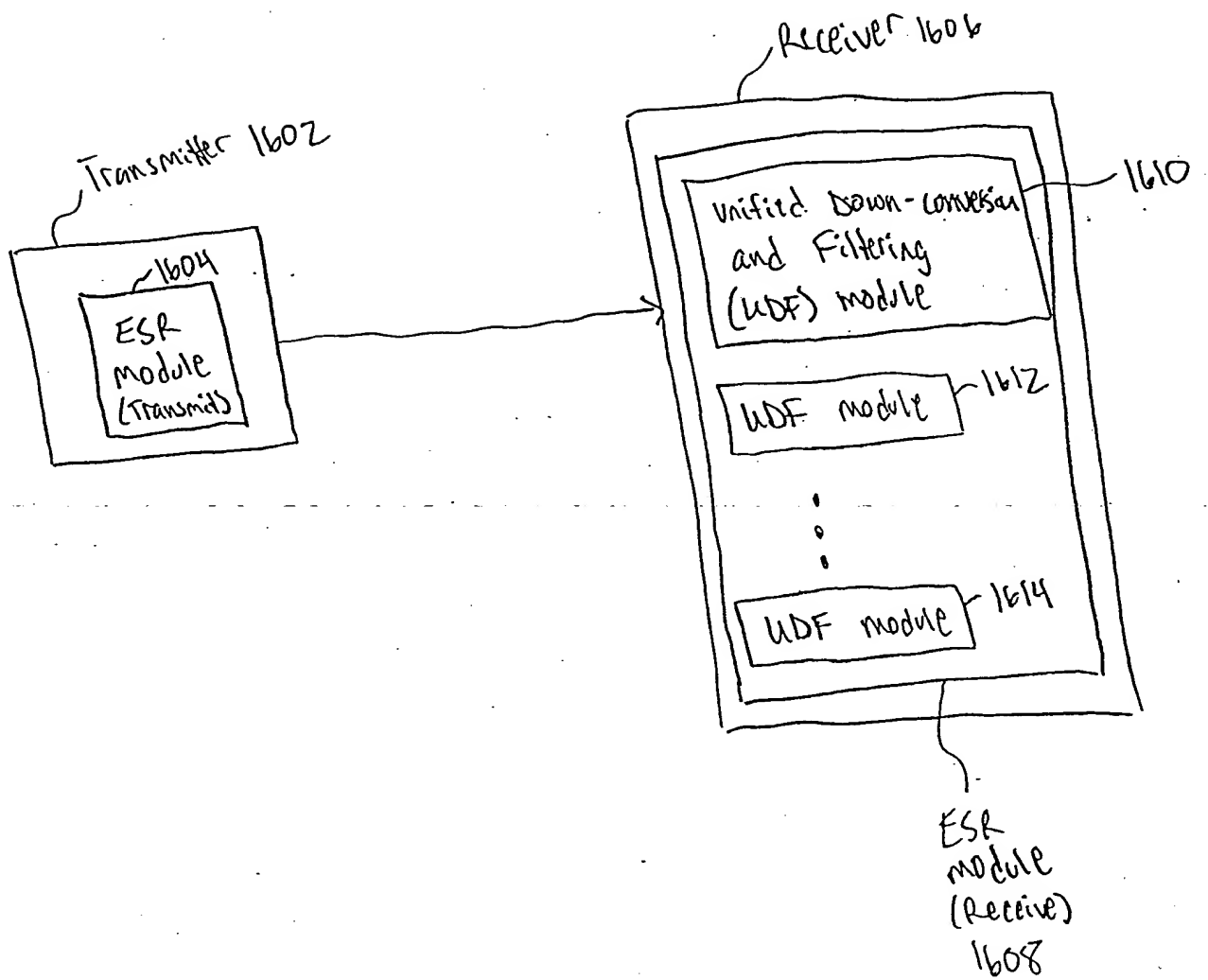


FIG. 16

## Unified Downconverting and Filtering (UDF) Module 1702

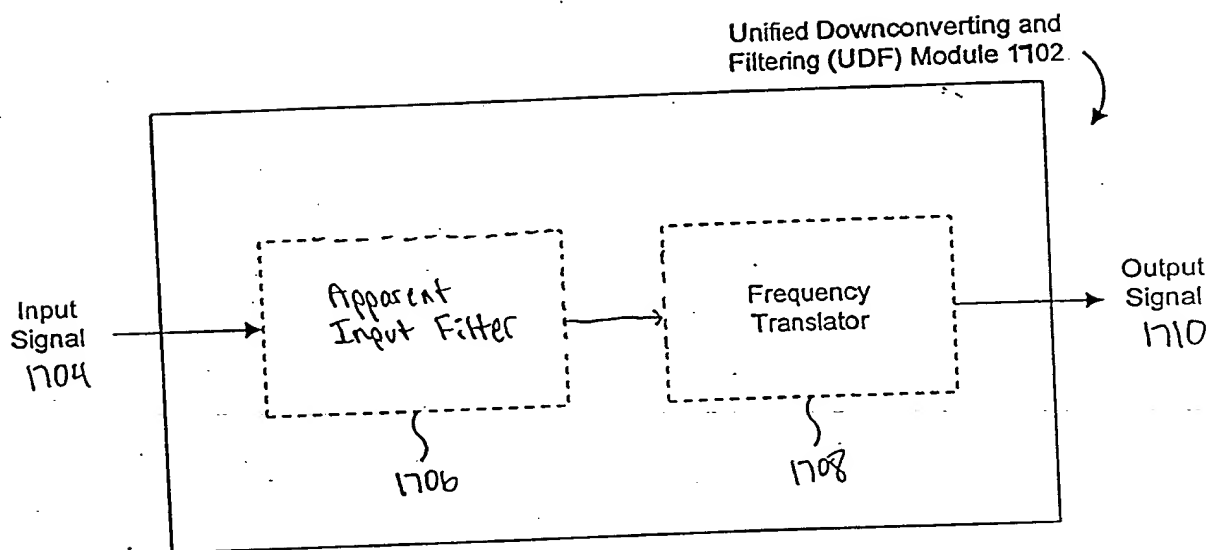


FIG. 17.

m



1802

Time Node	t-1 (rising edge of $\phi_1$ )	t-1 (rising edge of $\phi_2$ )	t (rising edge of $\phi_1$ )	t (rising edge of $\phi_2$ )	t+1 (rising edge of $\phi_1$ )
1902	$VI_{t-1}$ 1804	$VI_{t-1}$ 1808	$VI_t$ 1816	$VI_t$ 1826	$VI_{t+1}$ 1838
1904	—	$VI_{t-1}$ 1810	$VI_{t-1}$ 1818	$VI_t$ 1828	$VI_t$ 1840
1906	$VO_{t-1}$ 1806	$VO_{t-1}$ 1812	$VO_t$ 1820	$VO_t$ 1830	$VO_{t+1}$ 1842
1908	—	$VO_{t-1}$ 1814	$VO_{t-1}$ 1822	$VO_t$ 1832	$VO_t$ 1844
1910	— 1807	—	$VO_{t-1}$ 1824	$VO_{t-1}$ 1834	$VO_t$ 1846
1912	—	— 1815	—	$VO_{t-1}$ 1836	$VO_{t-1}$ 1848
1918	—	—	—	—	$VI_t$ 1850 $0.1 \cdot VO_t$ $0.8 \cdot VO_{t-1}$

FIG. 18



2000

ALIASING  
MODULE

2002

2008

2006

CONTROL  
SIGNAL

2010

2012

DOWN-CONVERTED  
OUTPUT SIGNAL

2004

INPUT  
SIGNAL

Fig. 2DA



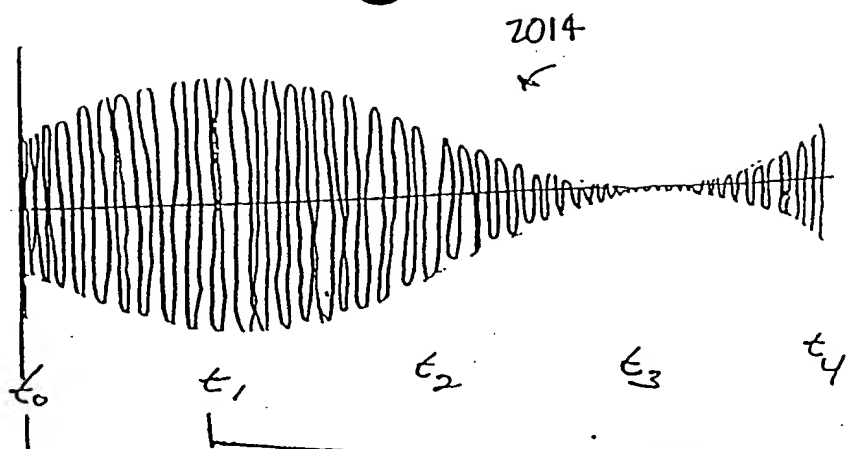


FIG. 20B

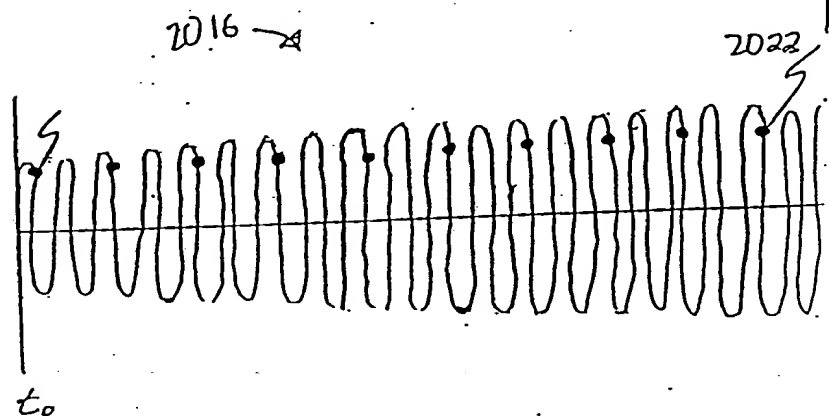


FIG. 20C

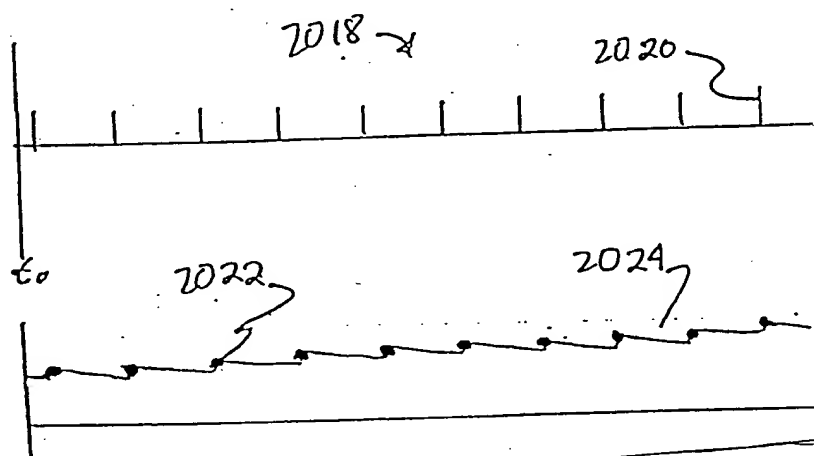


FIG. 20D

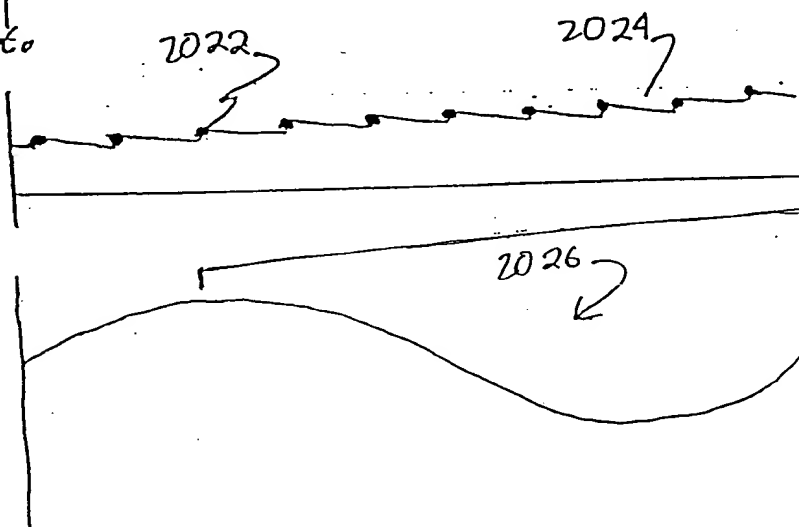


FIG. 20E

FIG. 20F

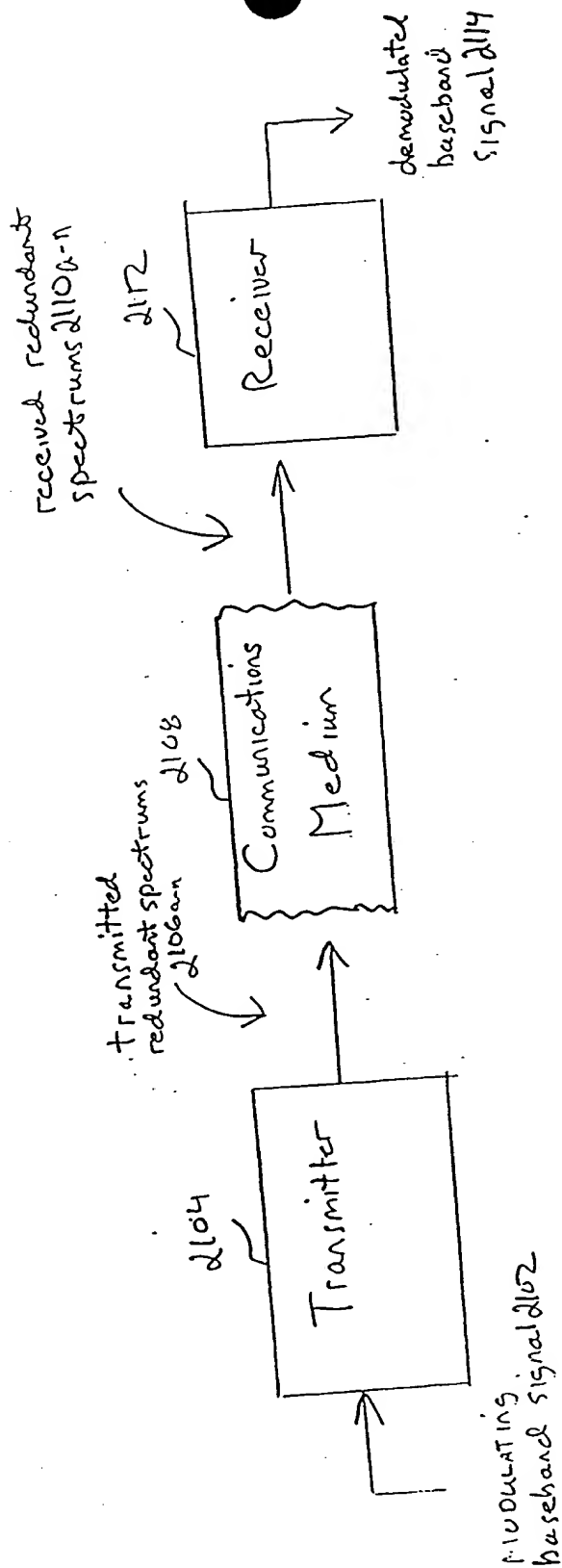
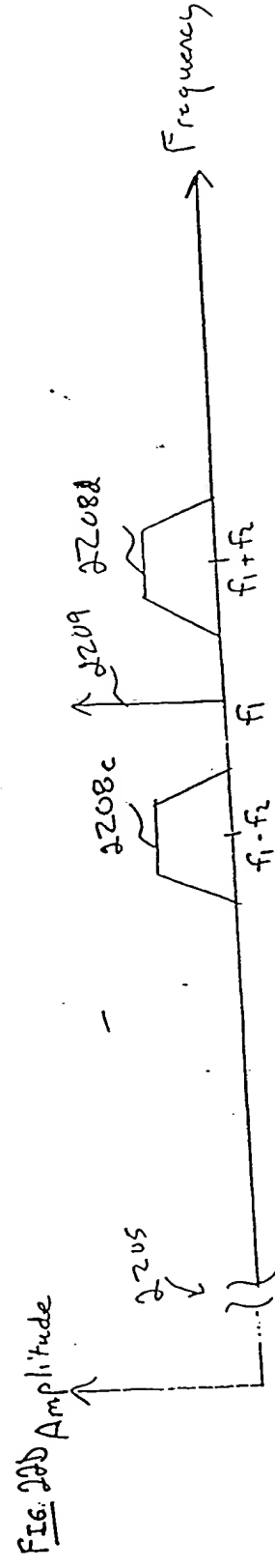
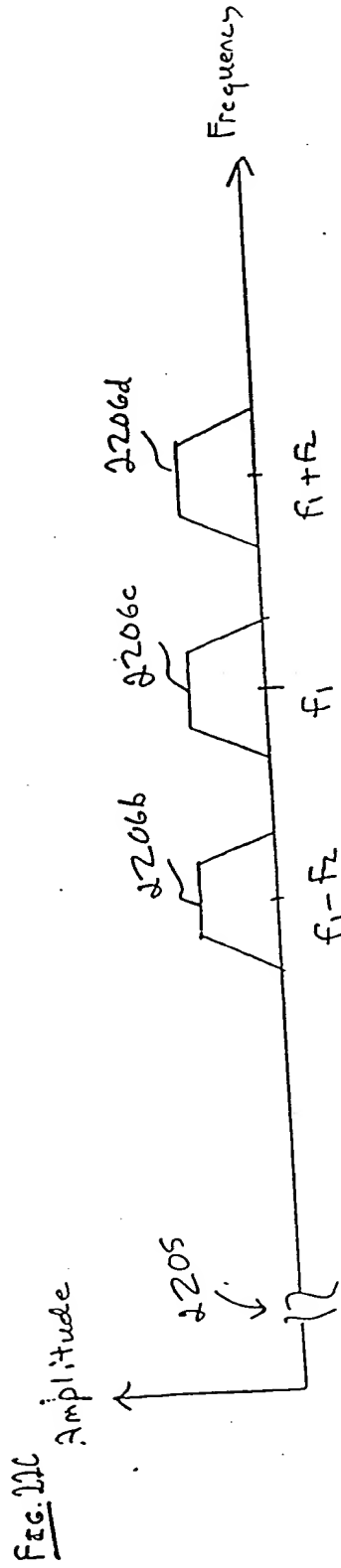
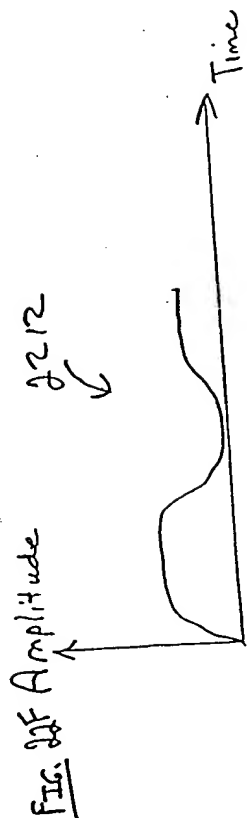
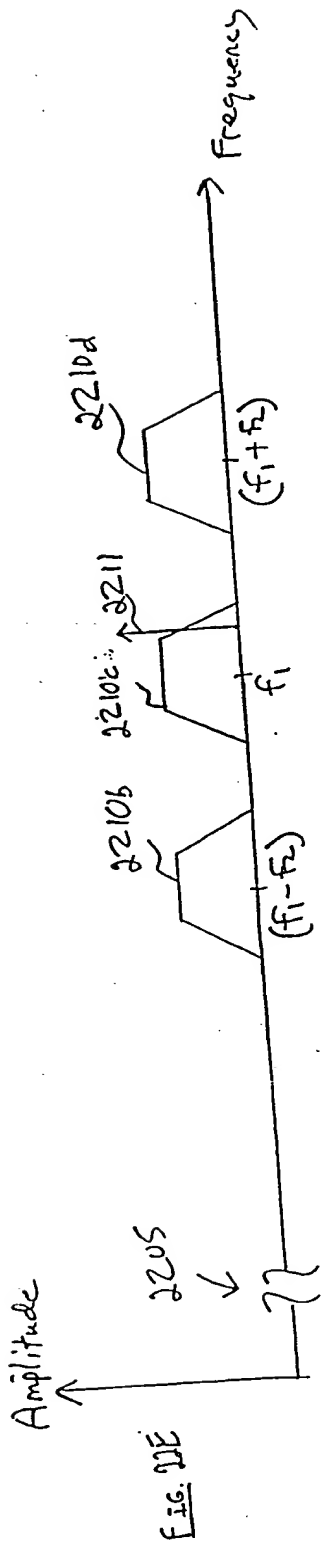


Fig. 21







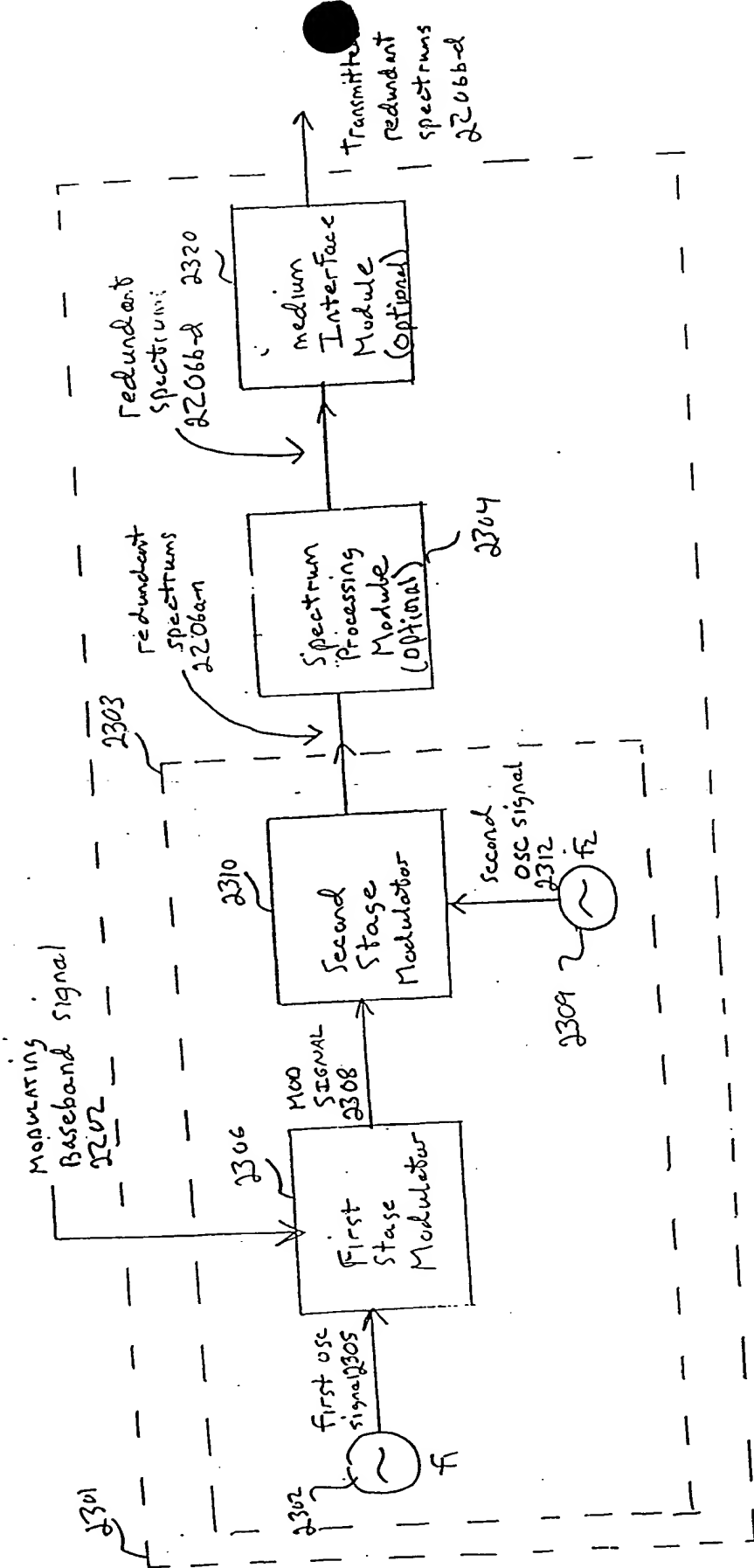
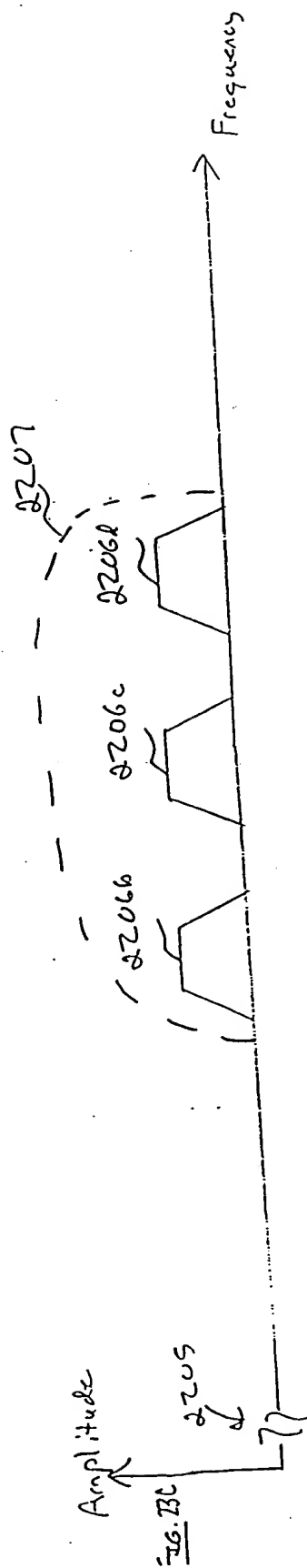
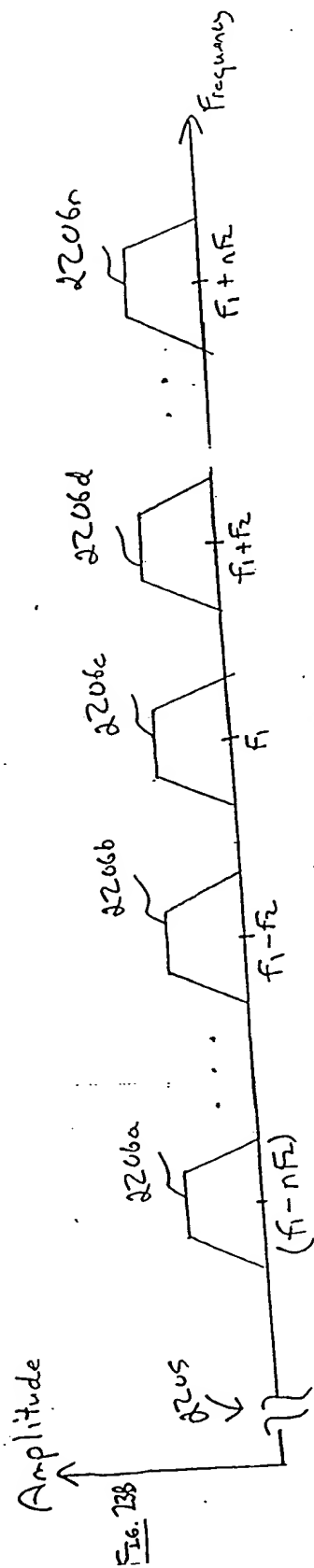


FIG. 23A



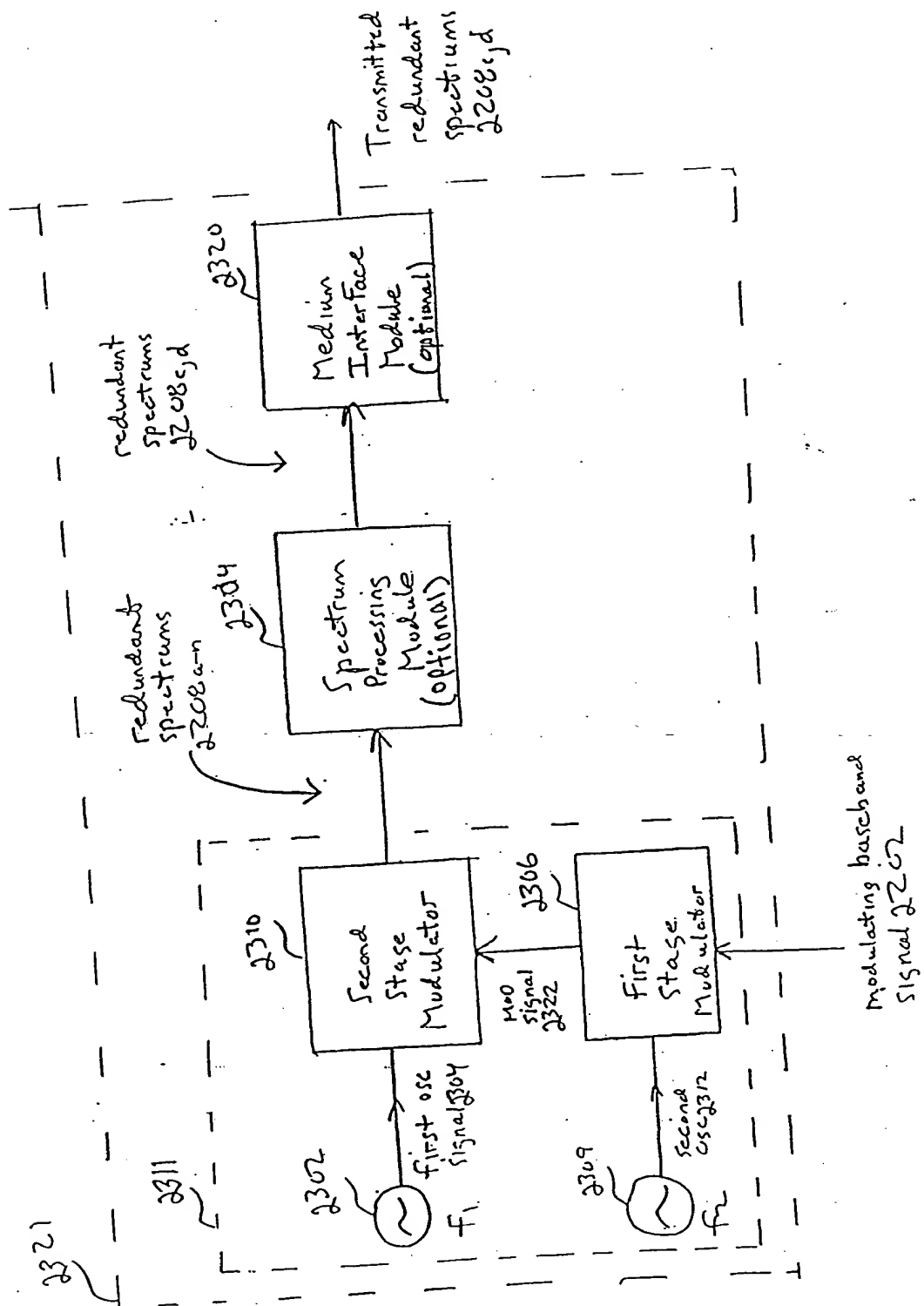


FIG. 23D

FIG. 23E

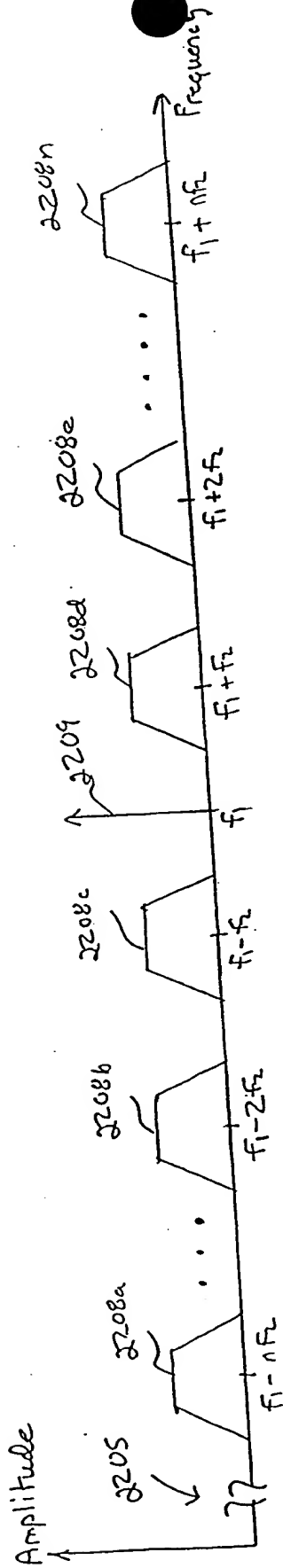
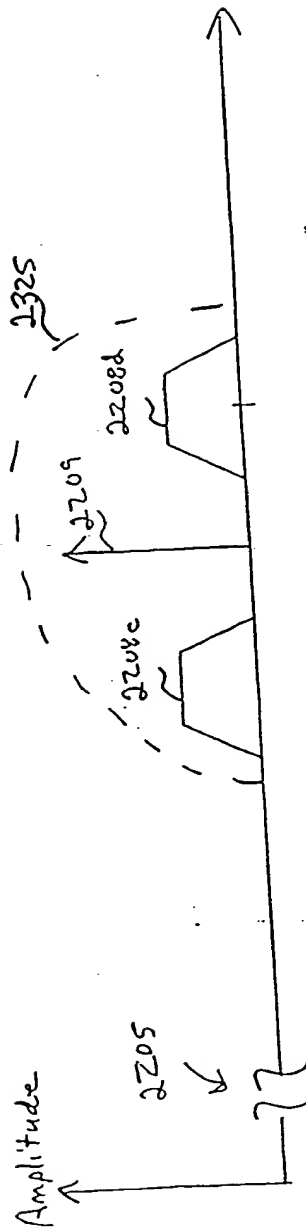
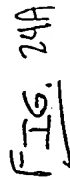
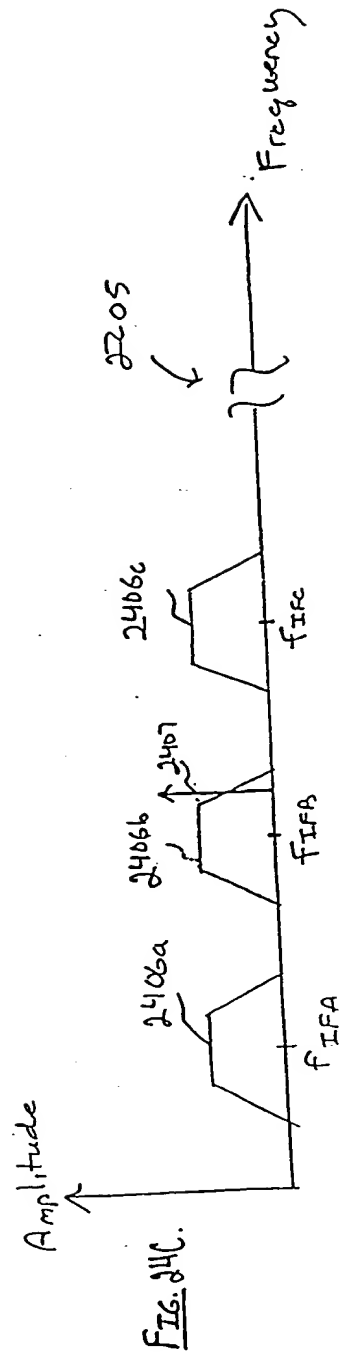
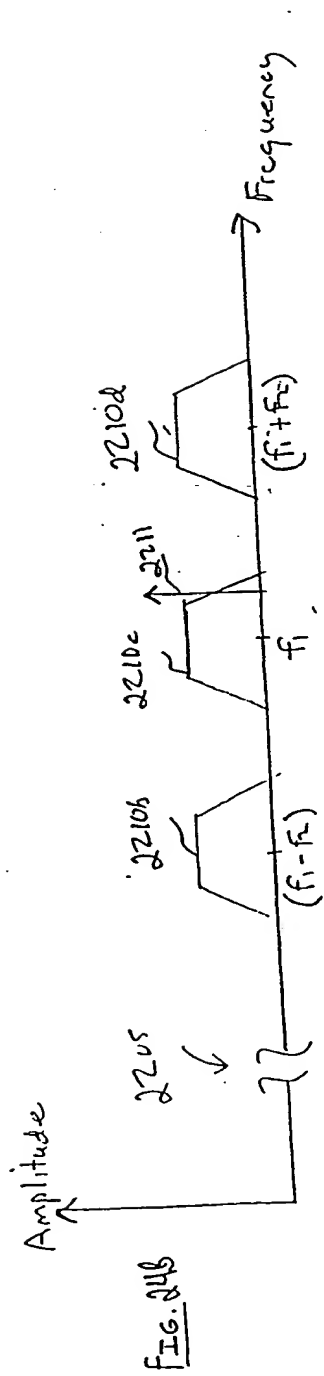
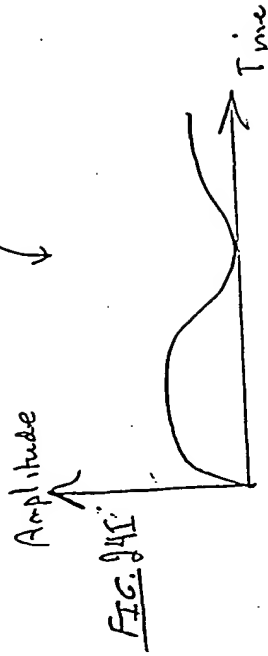
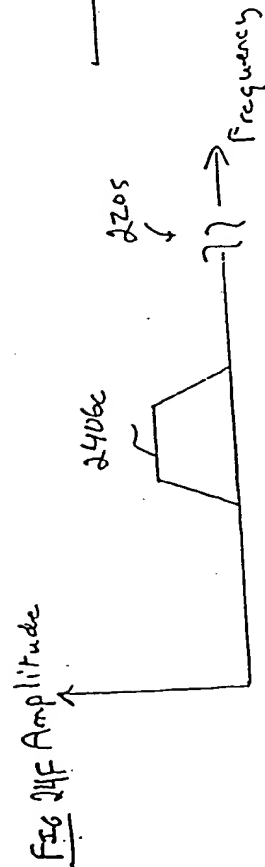
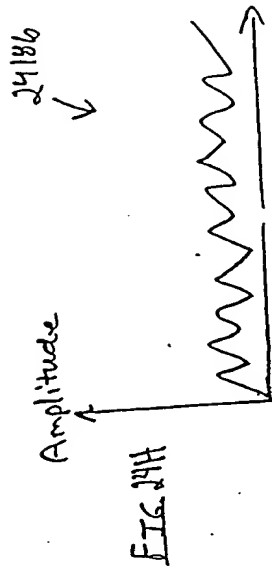
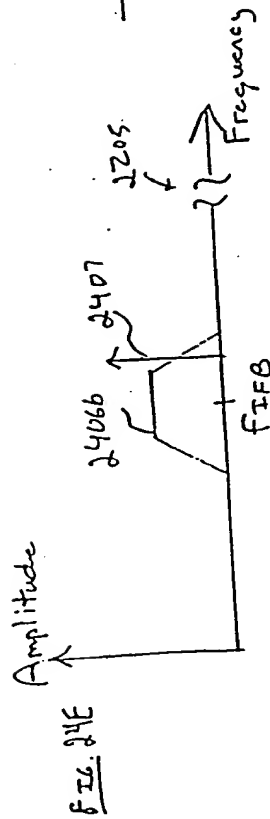
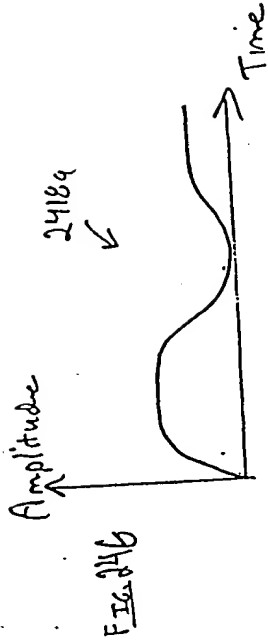
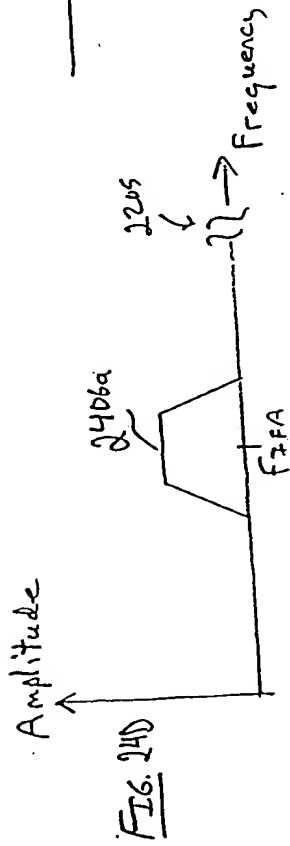


FIG. 23F



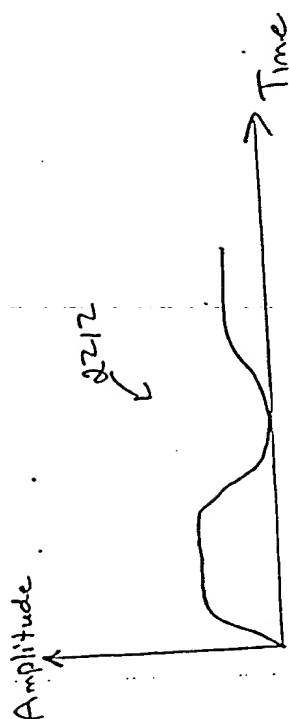






**San National Bank**

**San National Bank**



Fr. 245



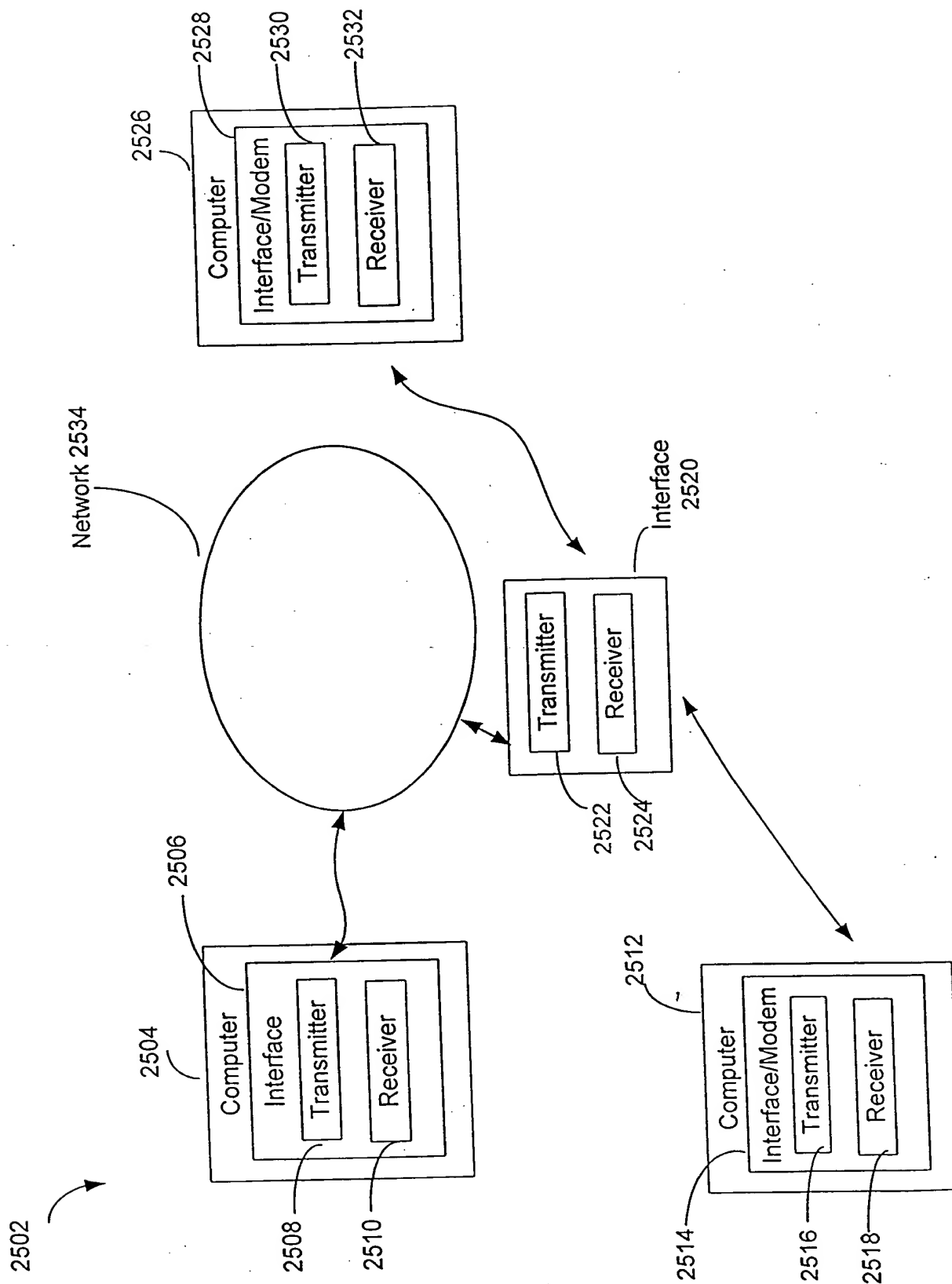


FIG. 25

2606

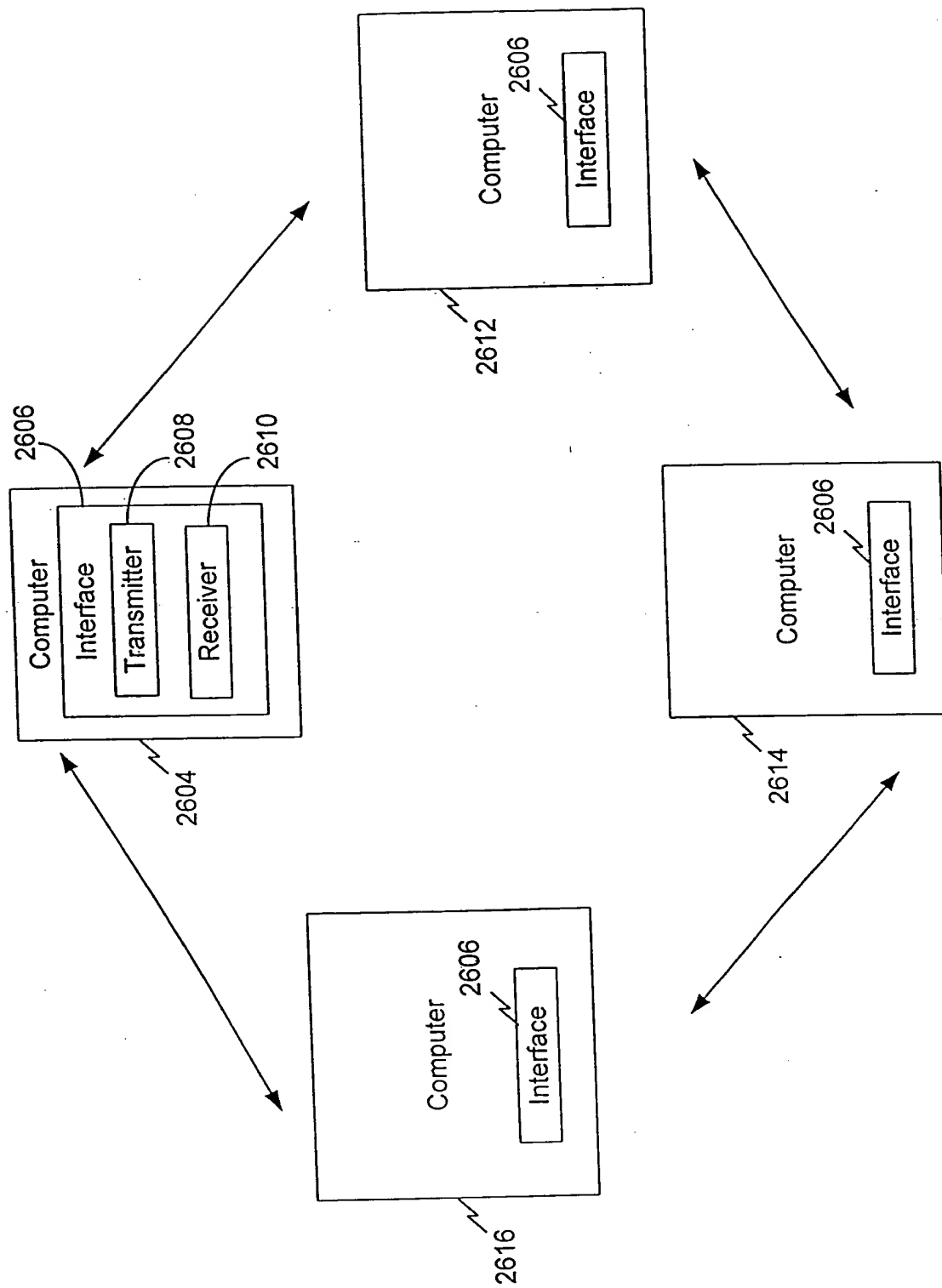
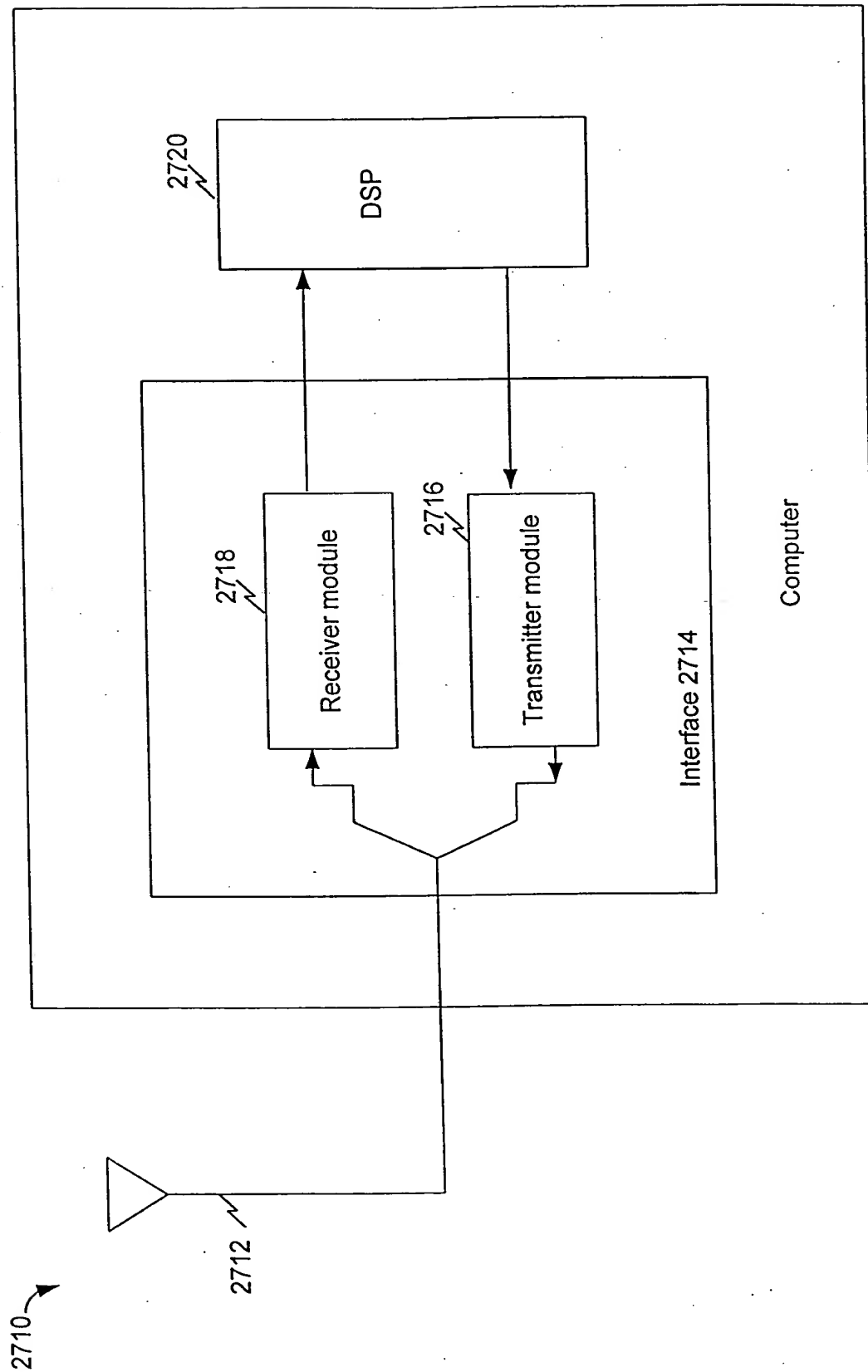
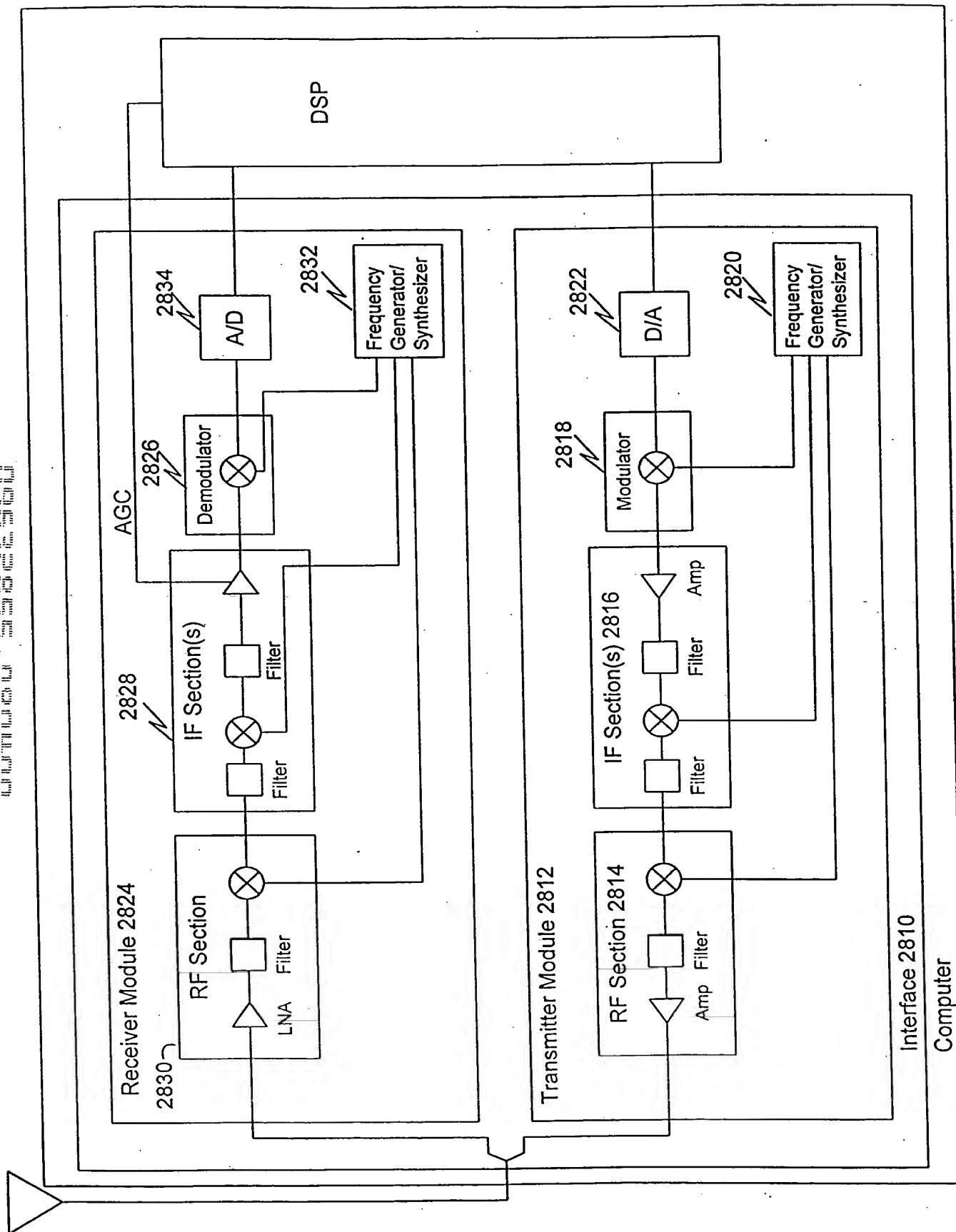


FIG. 26



**FIG. 27**



Heterodyne Implementation

FIG. 28

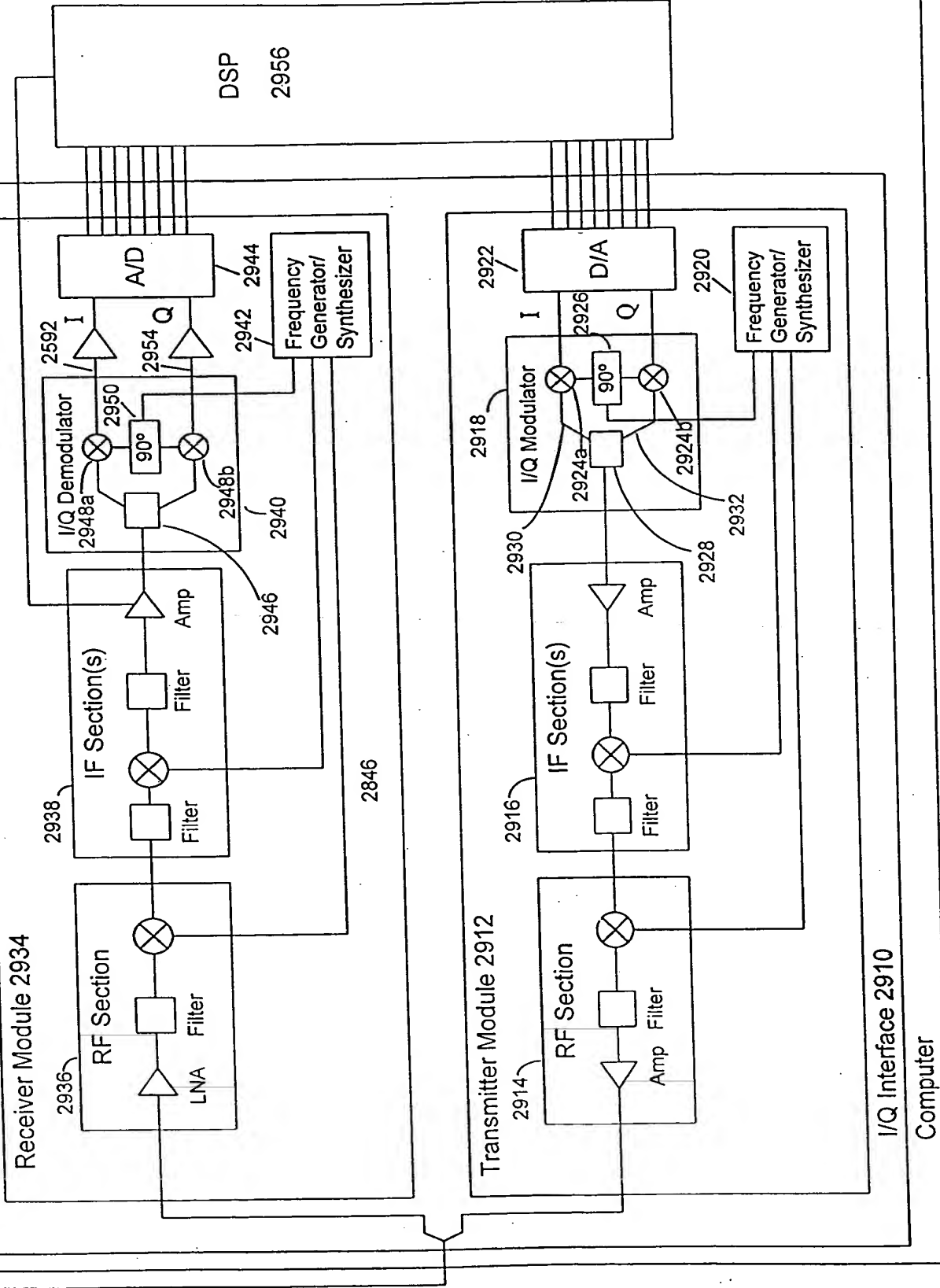


FIG. 29

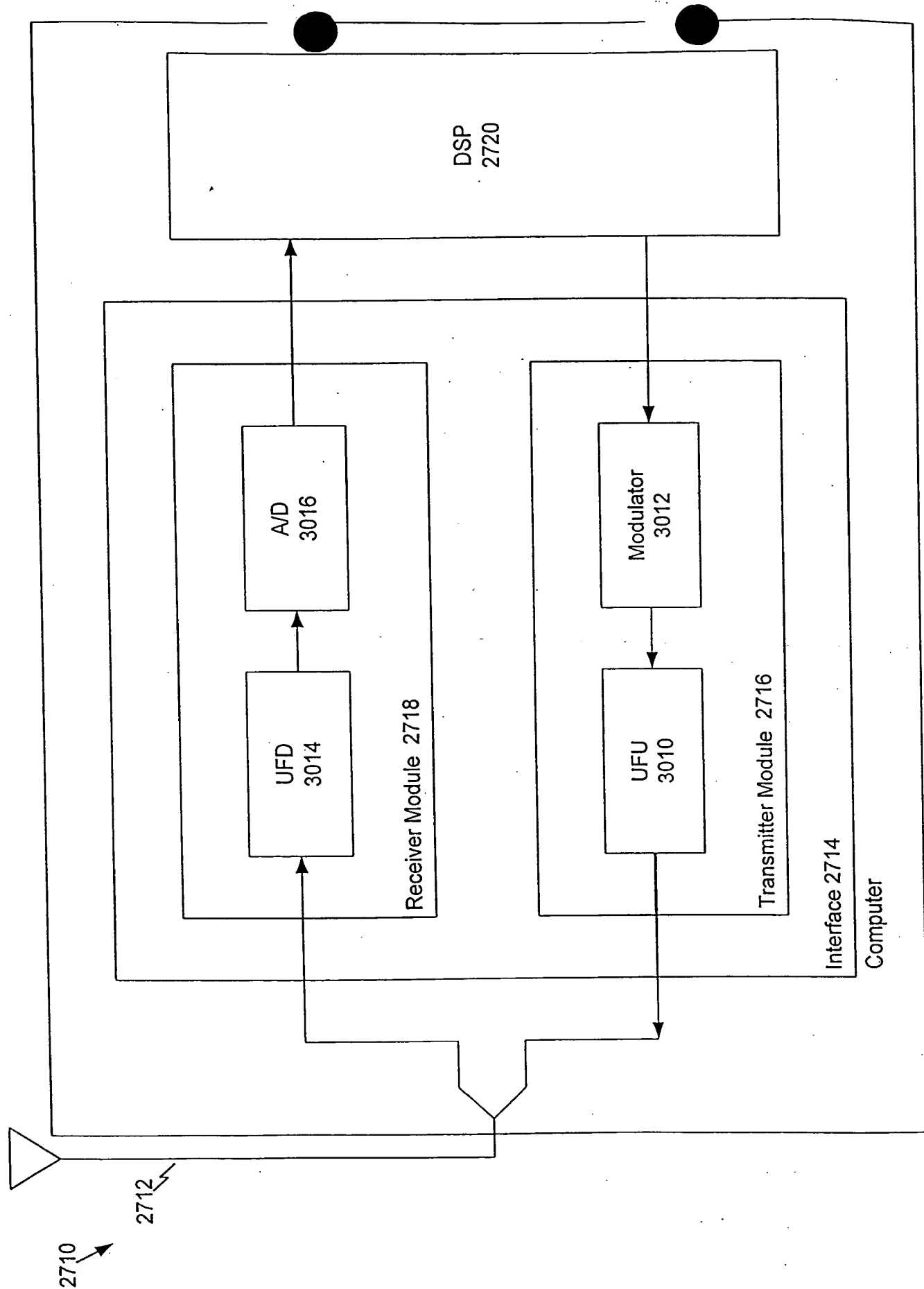
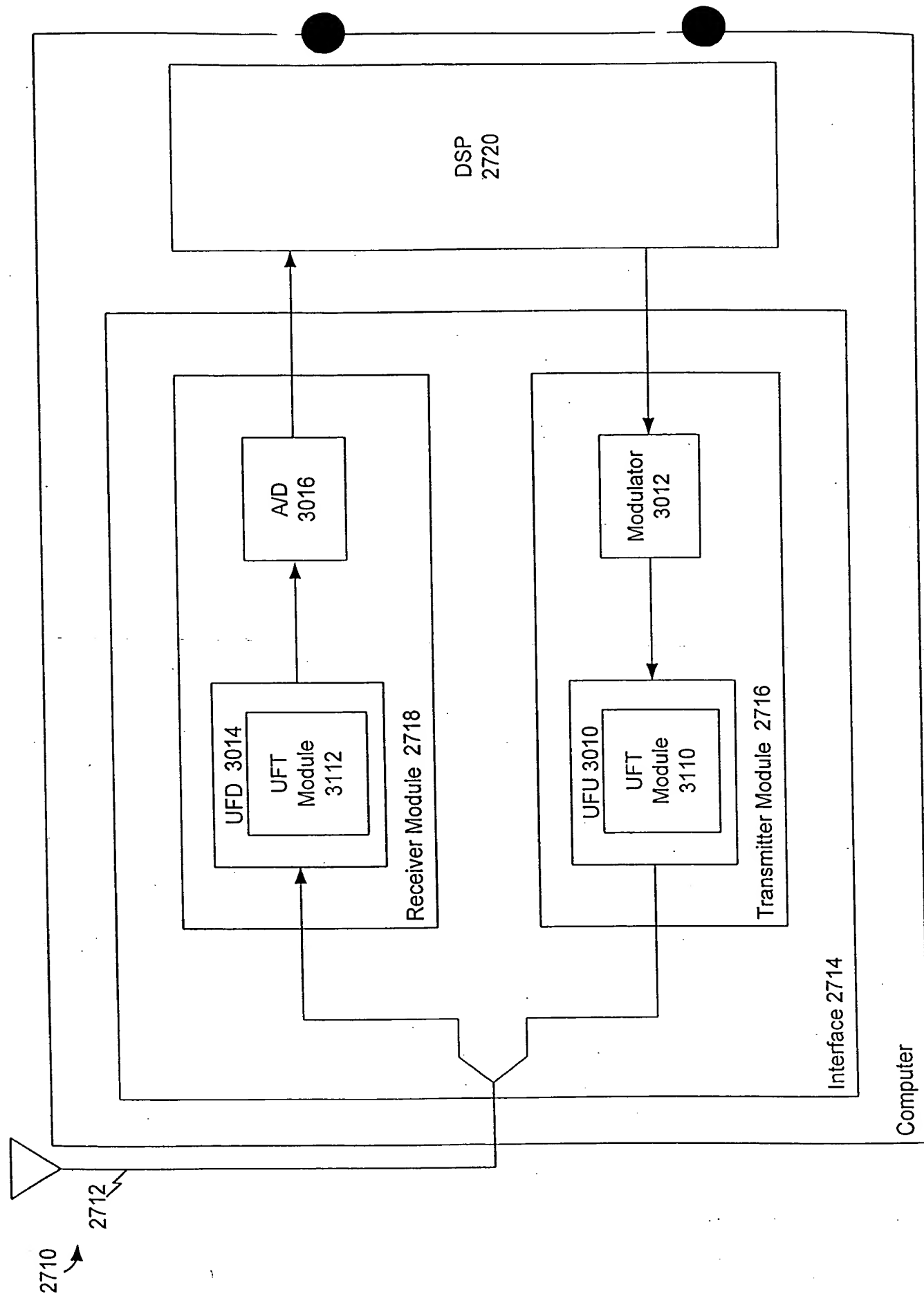


FIG. 30



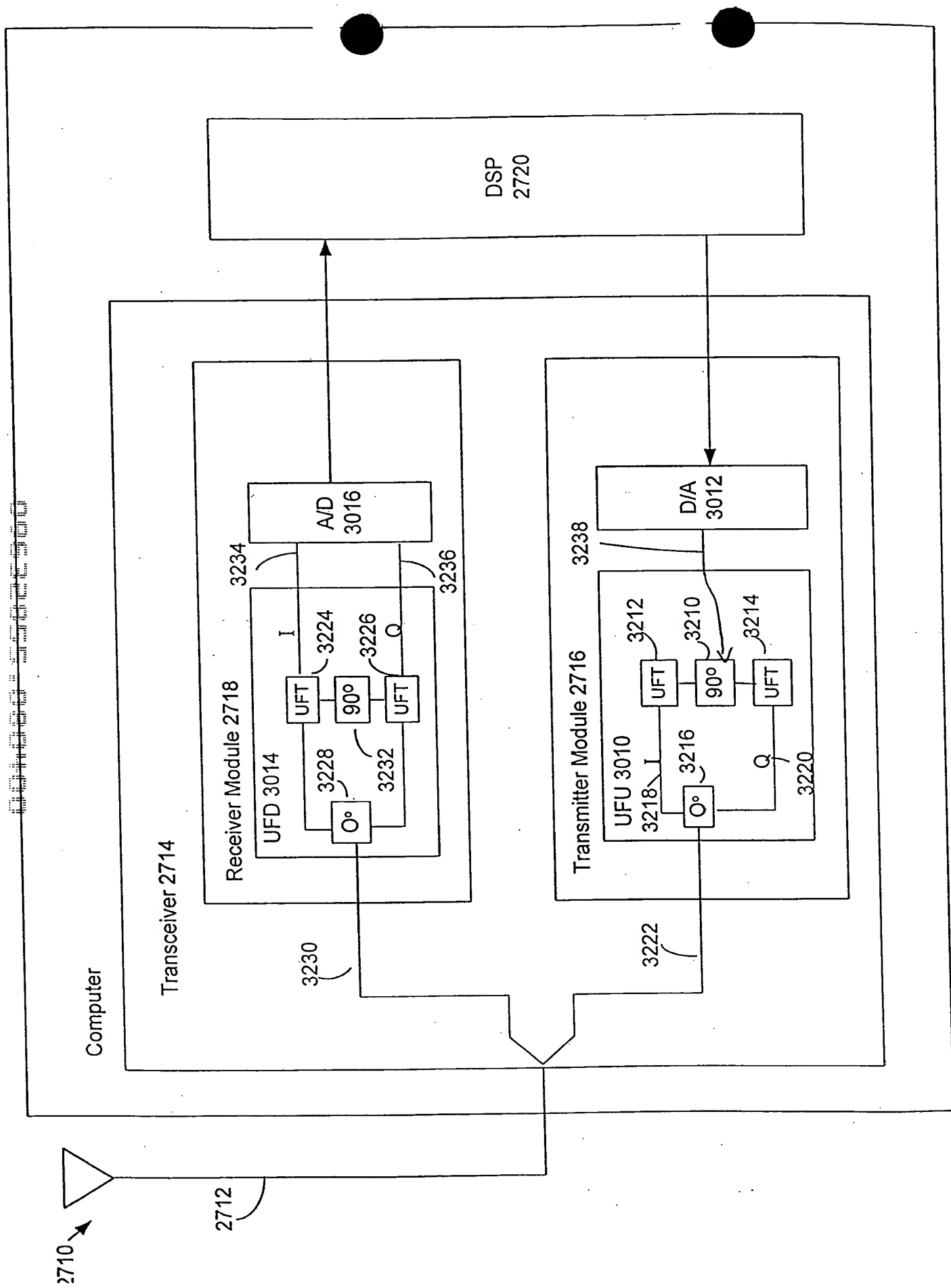


FIG. 32



000000 55822560

3302

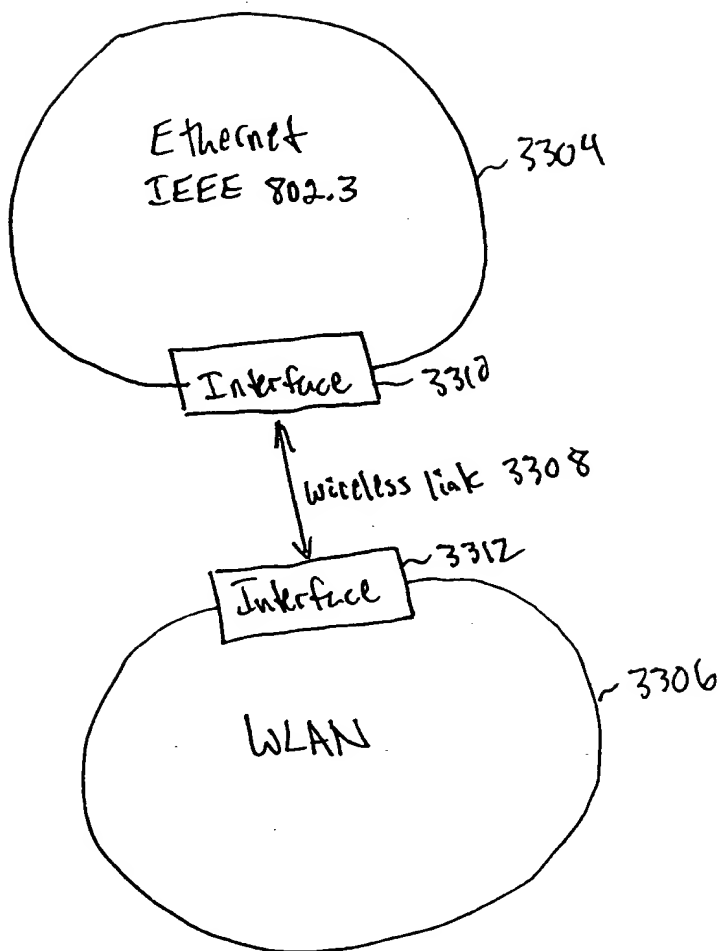


FIG. 33

3402  
↓

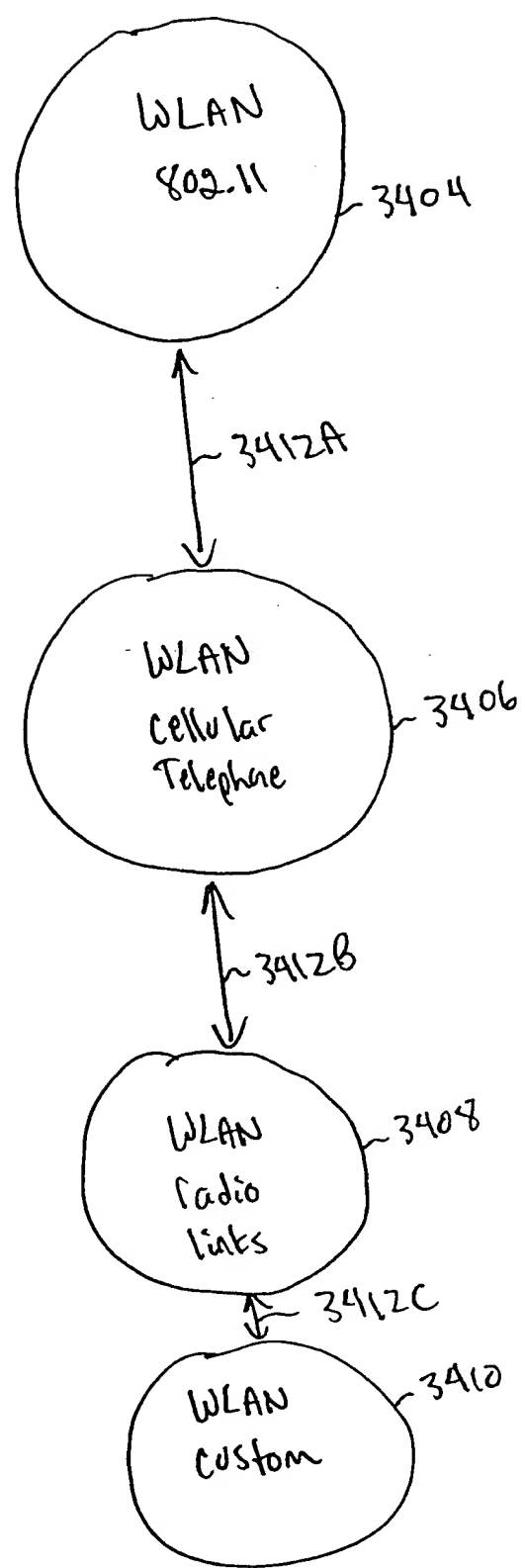
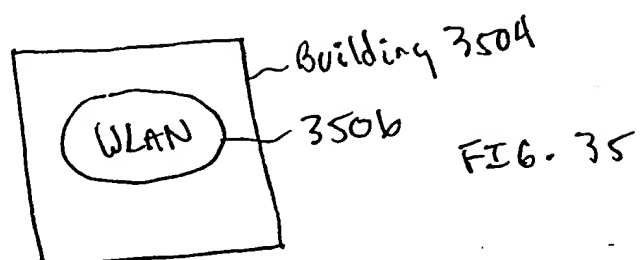


FIG. 34

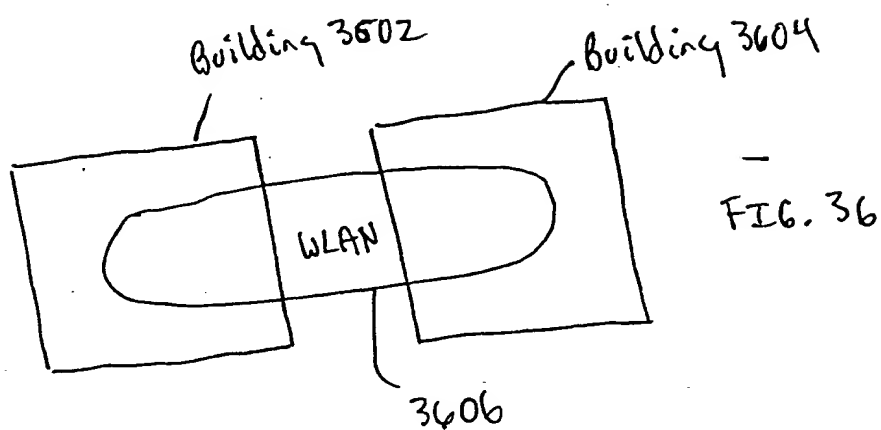
3502



WLAN

3506

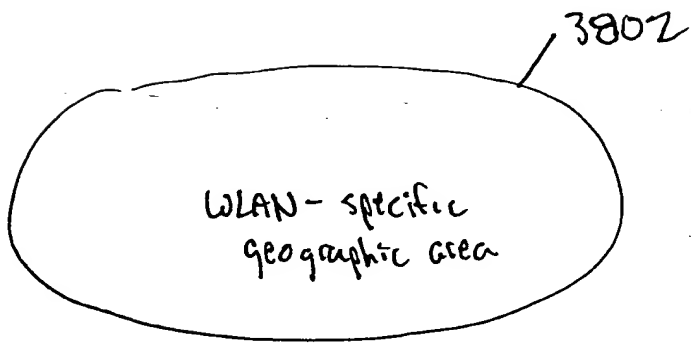
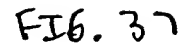
FIG. 35



WLAN

3606

FIG. 36



FILE 38

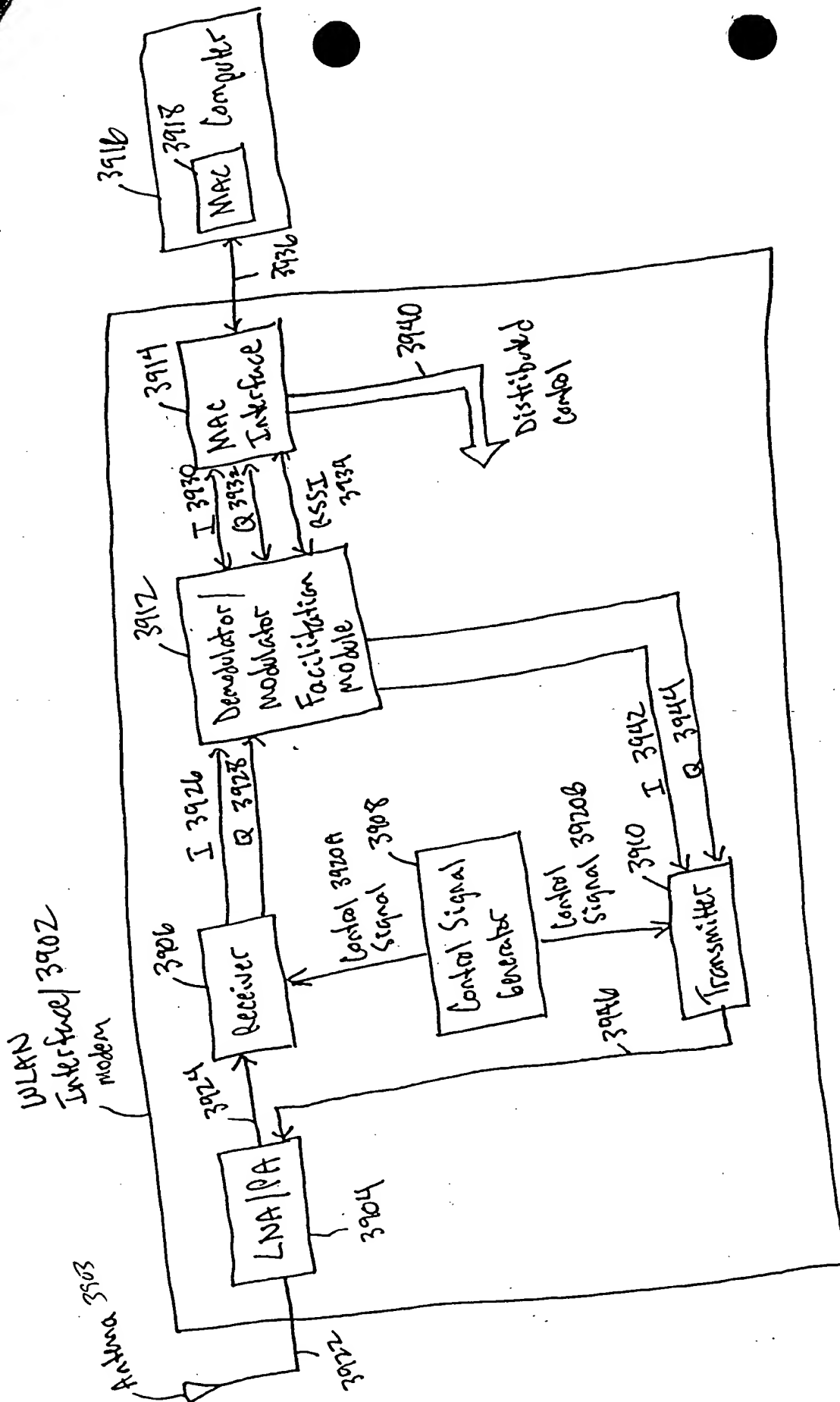


FIG. 39

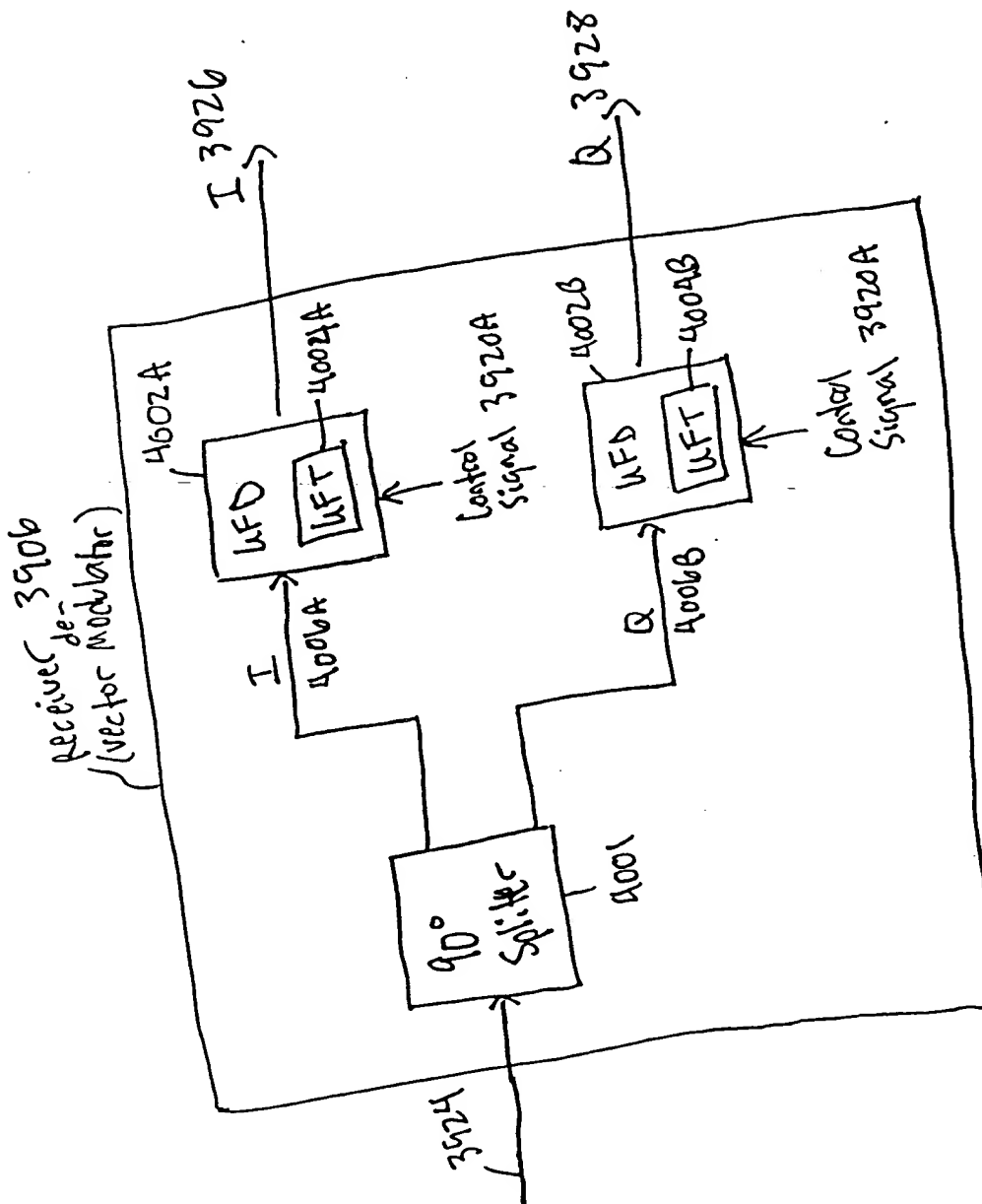


FIG. 40

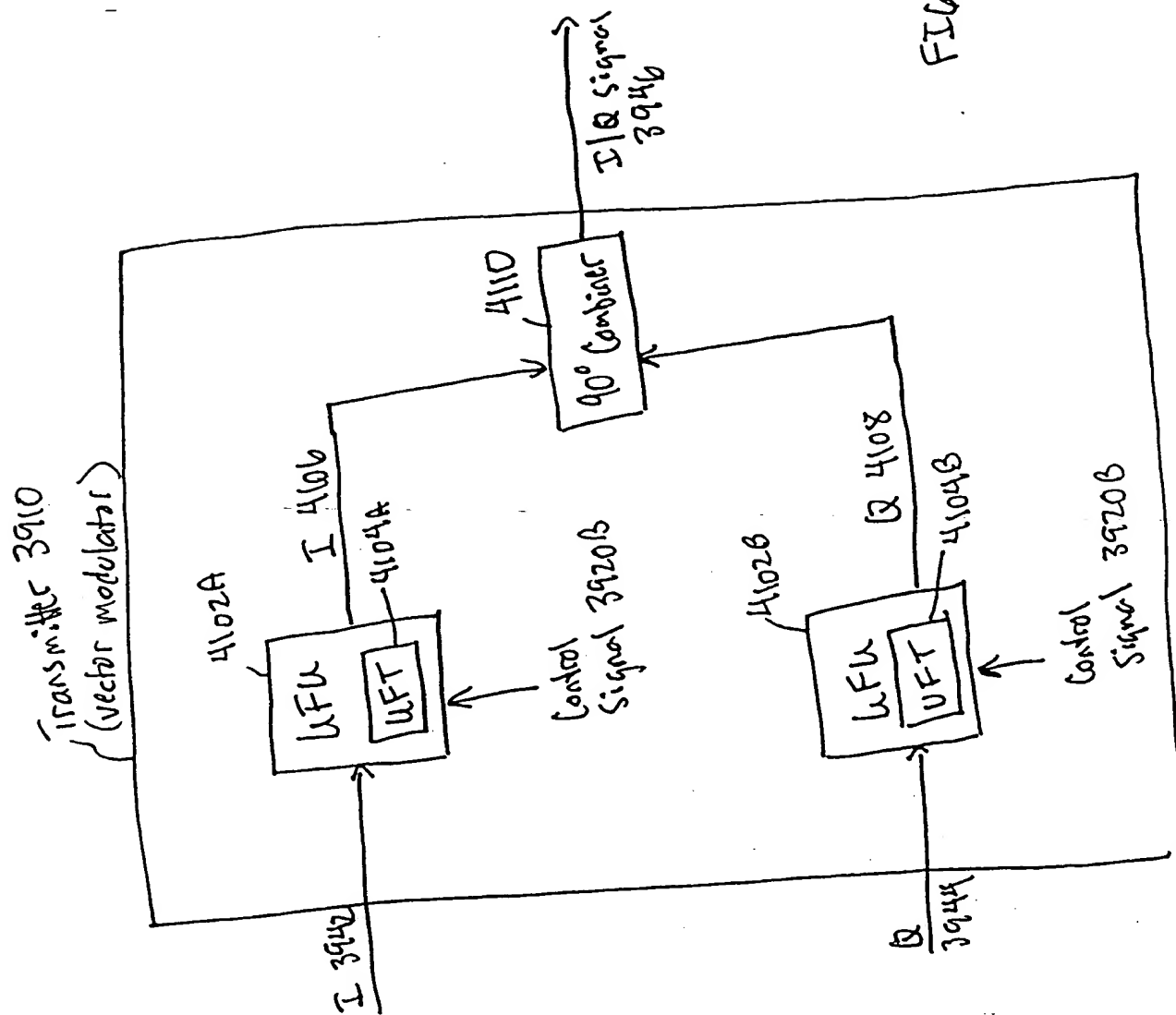


FIG. 41

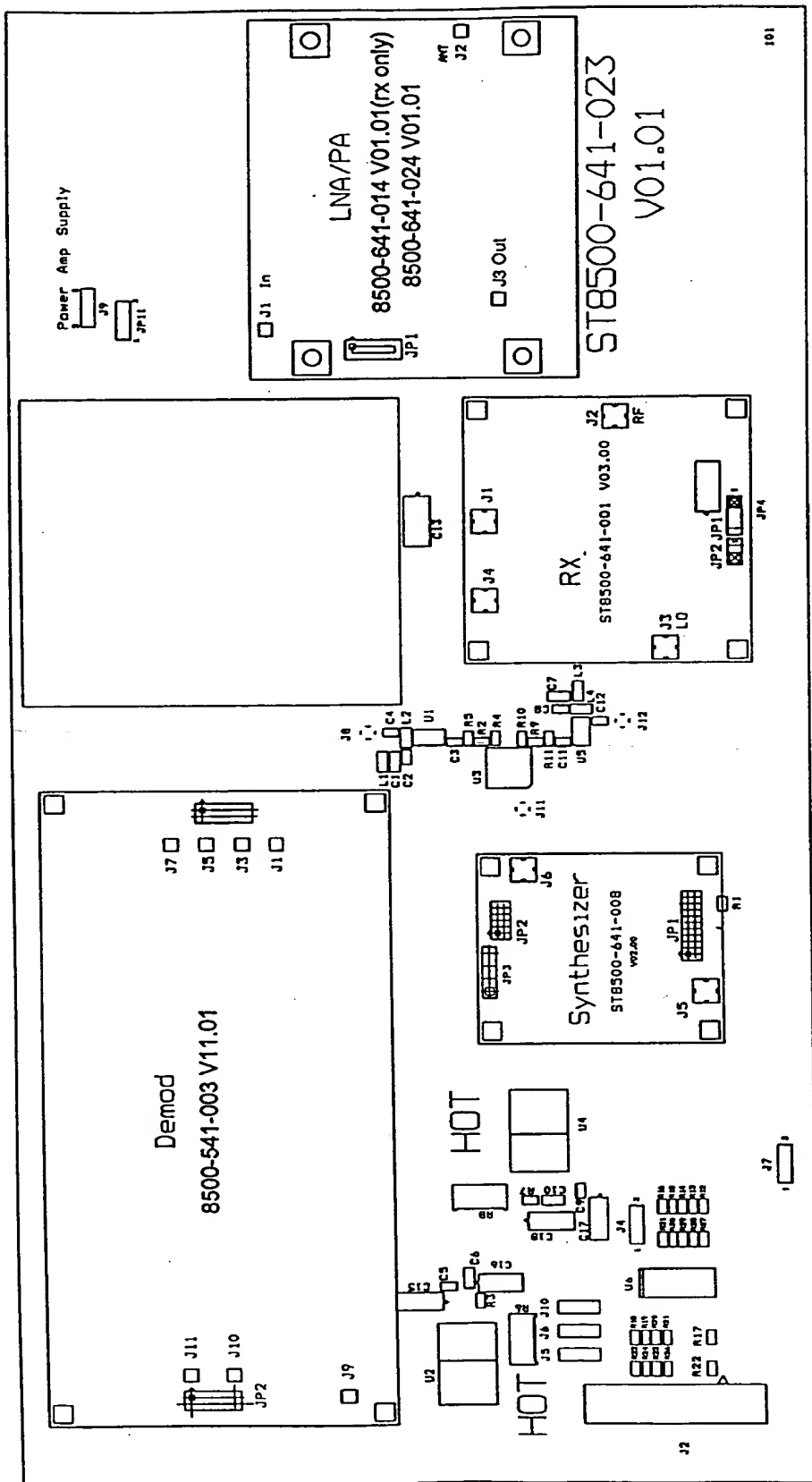
2027



FIG. 42



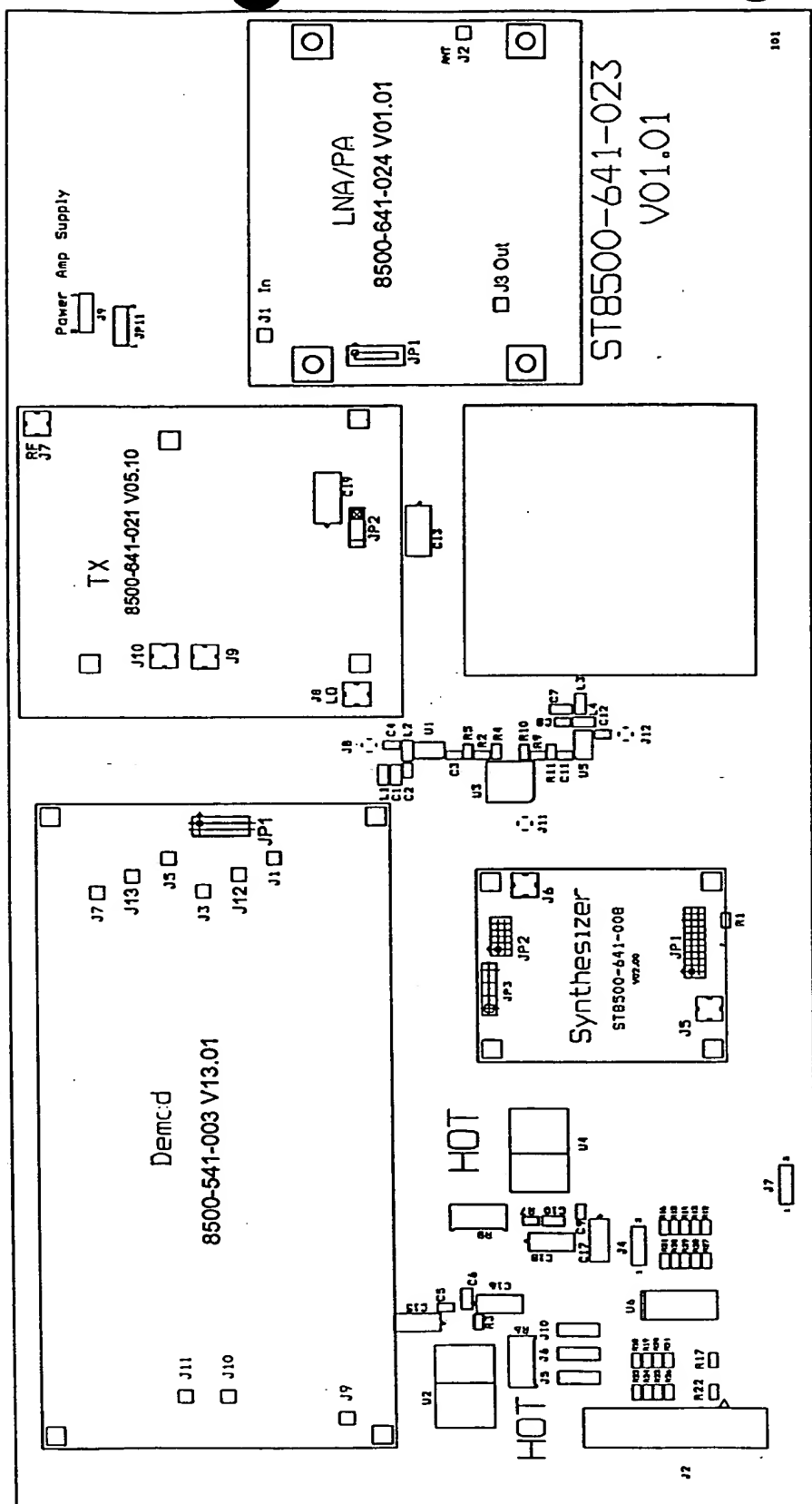
4302



Receive Only

FIG. 43

2044



## Transmit Only

FIG. 44

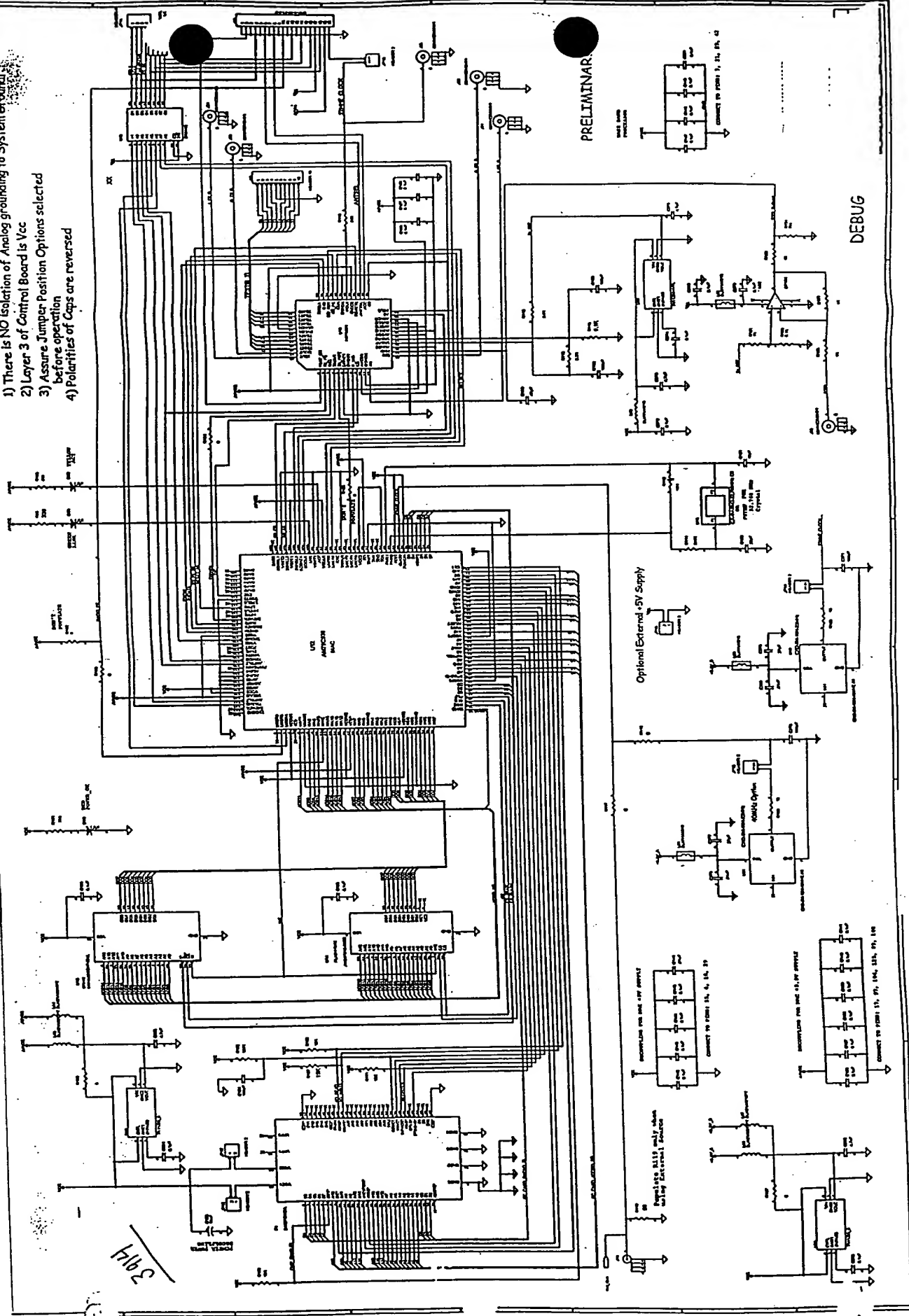
FIG. 45

1) There is NO Isolation of Analog Grounding to System Ground

2) Layer 3 of Control Board is Vcc

3) Assume Jumper Position Options selected before operation

4) Polarities of Caps are reversed



1002

# VISION PCMCIA CONTROLLER BOM

PARK Item

Quantity Reference

1 C123

2 C263, C273, C275, C282

3 C120, C125, C126, C127, C128, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C147, C148, C149, C264, C272, C274, C279, C280, C281, C283

4 C146, C269, C276

5 C124, C132, C133, C271, C278

6 C129

7 C270, C277

8 C130

9 C131

10 DS1

11 DS2

12 DS3

13 JP12, JP13, JP14, JP15, JP16, JP17

14 JP11

15 J16, J20, J21, J22, J23, J24, J25

16 J18

17 J19

18 P1

19 L59, L60, L61, L63, L64, L65, L66

20 R112

21 R114

22 R105

23 R108, R107, R108, R111

24 R116

25 R115

26 R113

27 R101

28 R110

29 R99, R100

30

Manufacturer

Kemet

Kemet

Kemet

Murata

Murata

Murata

Murata

Murata

Dialight

Dialight

Dialight

Specialty Electronics

BLKCON

Huber/Shuner

samtec

samtec

ITT Canon

Murata

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

Panasonic

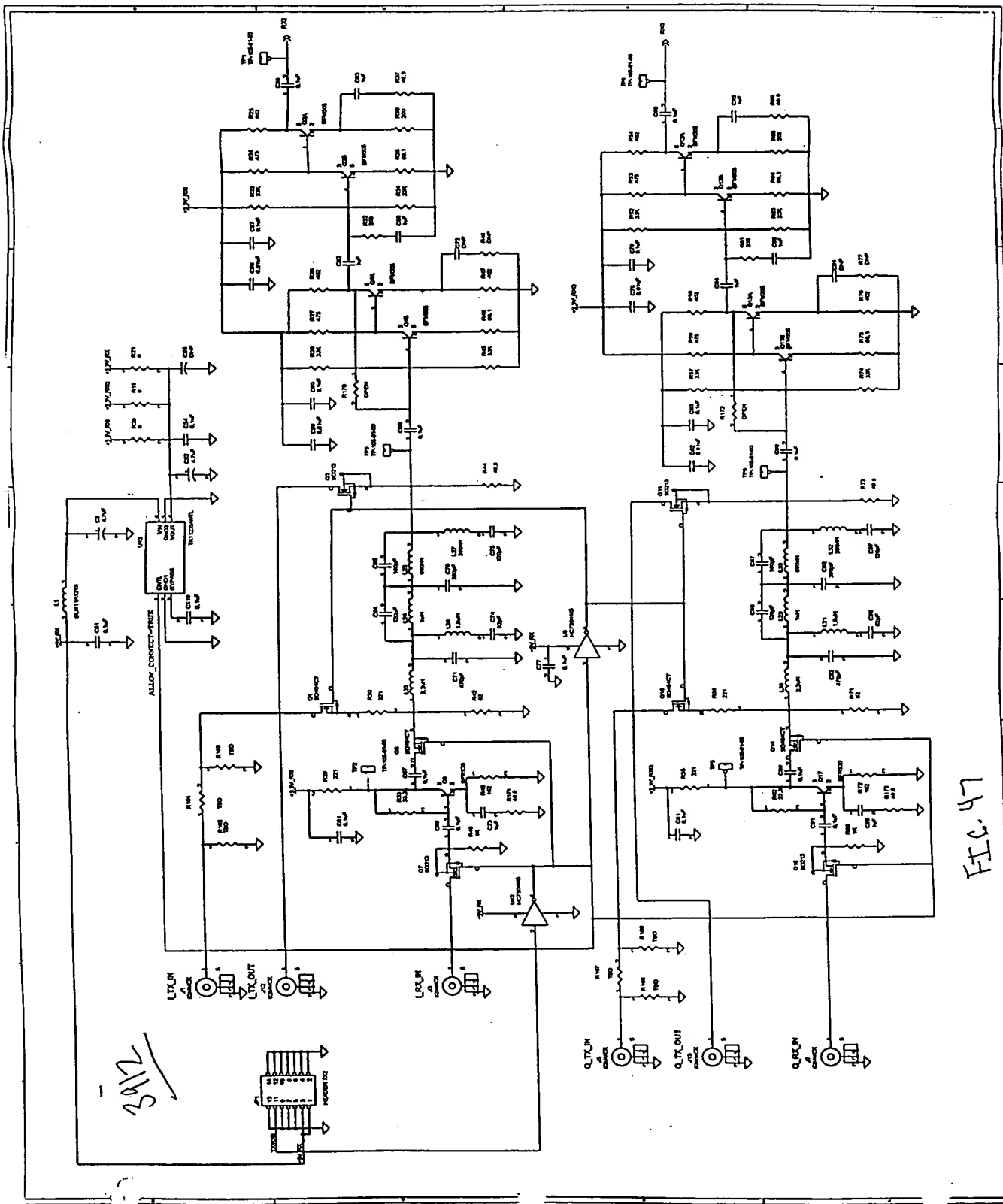
Panasonic

FIG. 46A

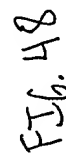
31	1	R119	50 , Resistor, 0603, F	ERJ-3GSYJ500V	Panasonic
32	2	R128, R129	10 , Resistor, 0603, L...	ERJ-3GSYJ100V	Panasonic
33	8	R102, R103, R104, R109, R117, R118, R120, R127	0, Resistor, 0603, 5%	RM732Z1J000ZT	ERJ-KOA
34	6	R121, R122, R123, R124, R125, R126	TBD, Resistor, 0603, 5%	3GSYJ000V	Panasonic
35	1	U10	SRAM	R	Panasonic
36	1	U12	MAC	KM62256DLTG-5L	Samsung
37	1	U13	Baseband Processor	M5M5256CVP-55LL	Mitsubishi
38	1	U14	FLASH RAM	AM79C930	AMD
39	1	U15	32 KHz Crystal	HFA3842 A1	Harris
40	2	U45	Bus Buffer	AM29F010-55EC	AMD
41	1	U48	Regulator 3.5 V	CX-6V-SM2-32.768KHz C/I	Statek
42	1	U49	22MHz Oscillator	DS3862	National
43	1	U50	2 Volt Reference	TK11235BMC	TOKO
44	1	U51	40MHz Oscillator	FOX F3346-22MHz	FOX
				TK11220BMC	TOKO
				CXO-M-10N-40MHz A/I	Statek

FIG. 46B

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Don Mendenhall, 1908.



2012

Item	Quantity	Reference	Part	Part Number	Manufacturer
1	4	C3,C52,C108,C110	4.7uF	T491A475K006AS	KEMET
2	26	C51,C54,C57,C58,C60,C61, C67,C68,C69,C77,C79,C80, C81,C83,C89,C90,C91,C111, C112,C113,C114,C115,C116, C117,C118,C119	0.1uF	GRM39Y5V104Z016	Murata
3	1	C55	DNP	T491A475K006AS	KEMET
4	8	C56,C59,C78,C82,C99,C101, C103,C104	0.01uF	GRM39X7R103K050	Murata
5	8	C62,C63,C66,C73,C84,C85, C88,C95	1uF	GRM40Y5V105Z016	Murata
6	4	C64,C75,C86,C97	120pF	GRM39COG121J050	Murata
7	2	C65,C87	180pF	GRM39COG181J050	Murata
8	2	C70,C92	390pF	GRM39COG391J050	Murata
9	2	C71,C93	470pF	GRM39COG471J050	Murata
10	2	C72,C94	DNP	GRM40Y5V105Z016	Murata
11	2	C74,C96	82pF	GRM39COG820J050	Murata
12	2	C100,C106	DNP	DNP	Murata
13	2	C105,C102	1000pF	GRM39COG102K050	Murata
14	2	D3,D1	BAW56WT1	BAW56WT1	Motorola
15	2	D4,D2	BAV70LT1	BAV70LT1	Motorola
16	1	JP1	HEADER 7X2	FTSH-107-02-L-D	Samtec
17	9	J1,J3,J5,J7,J9,J10,J11, J12,J13	82MMCX	82MMCX-50-0-1	Suhner
18	1	L1	BLM11A121S	BLM11A121S	Murata
19	2	L23,L28	2.2uH	LQG21N2R2K10	Murata
20	2	L29,L24	1uH	LQG21N1R0K10	Murata
21	2	L30,L25	680nH	LQG21NR68K10	Murata
22	2	L26,L31	1.8uH	LQG21N1R8K10	Murata
23	2	L32,L27	390nH	LQG21NR39K10	Murata
24	4	Q1,Q5,Q10,Q14	SD404CY	SD404CY	Calogic
25	4	Q2,Q4,Q12,Q13	BFM505	BFM505	Philips
26	4	Q3,Q7,Q11,Q16	SD213	SD213	Calogic
27	2	Q17,Q8	BFR520	BFR520	Philips
28	4	R19,R20,R21,R83	0	ERJ3GSY0R00	Panasonic
29	8	R23,R26,R34,R45,R52,R57, R63,R74	33K	ERJ3GSYJ333	Panasonic
30	4	R24,R27,R53,R58	475	ERJ3EKF4750	Panasonic
31	6	R25,R28,R47,R54,R59,R76	402	ERJ3EKF4020	Panasonic
32	4	R29,R30,R55,R56	221	ERJ3EKF2210	Panasonic
33	2	R32,R61	200	ERJ3GSYJ201	Panasonic
34	2	R33,R62	33.2K	ERJ3GSYJ333	Panasonic
	4	R35,R46,R64,R75	68.1	ERJ3EKF68R1	Panasonic

FIG. 49A



36	2	R36,R65	200	ERJ3EKF2000	Panasonic
7	6	R37,R44,R66,R73,R171, R173	49.9	ERJ3EKF49R9	Panasonic
38	6	R40,R68,R78,R79,R80,R89	1K	ERJ3EKF1001	Panasonic
39	2	R42,R71	62	ERJ3GSYJ620	Panasonic
40	2	R43,R72	162	ERJ3EKF1620	Panasonic
41	2	R77,R48	DNP	ERJ3GSYJ330	Panasonic
42	4	R81,R82,R85,R87	2K	ERJ3EKF2001	Panasonic
43	1	R84	909	ERJ3EKF9090	Panasonic
44	1	R88	15K	ERJ3EKF1502	Panasonic
45	1	R90	10K	ERJ3EKF1002	Panasonic
46	2	R91,R92	100	ERJ3EKF1000	Panasonic
47	6	R164,R165,R166,R167,R168, R169	TBD		Panasonic
48	2	R170,R172	OPEN		Panasonic
49	6	TP1,TP2,TP3,TP4,TP5,TP6	TP-105-01-00		
50	2	U42,U6	NC7S04M5	NC7S04M5	National Semiconductor
51	1	U7	AD8052AR	AD8052AR	Analog Devices
52	1	U8	AD1582	AD1582	Analog Devices
53	1	U9	AD605AR	AD605AR	Analog Devices
54	1	U43	TK11235AMTL	TK11235BM	Toko

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FIG. 49B

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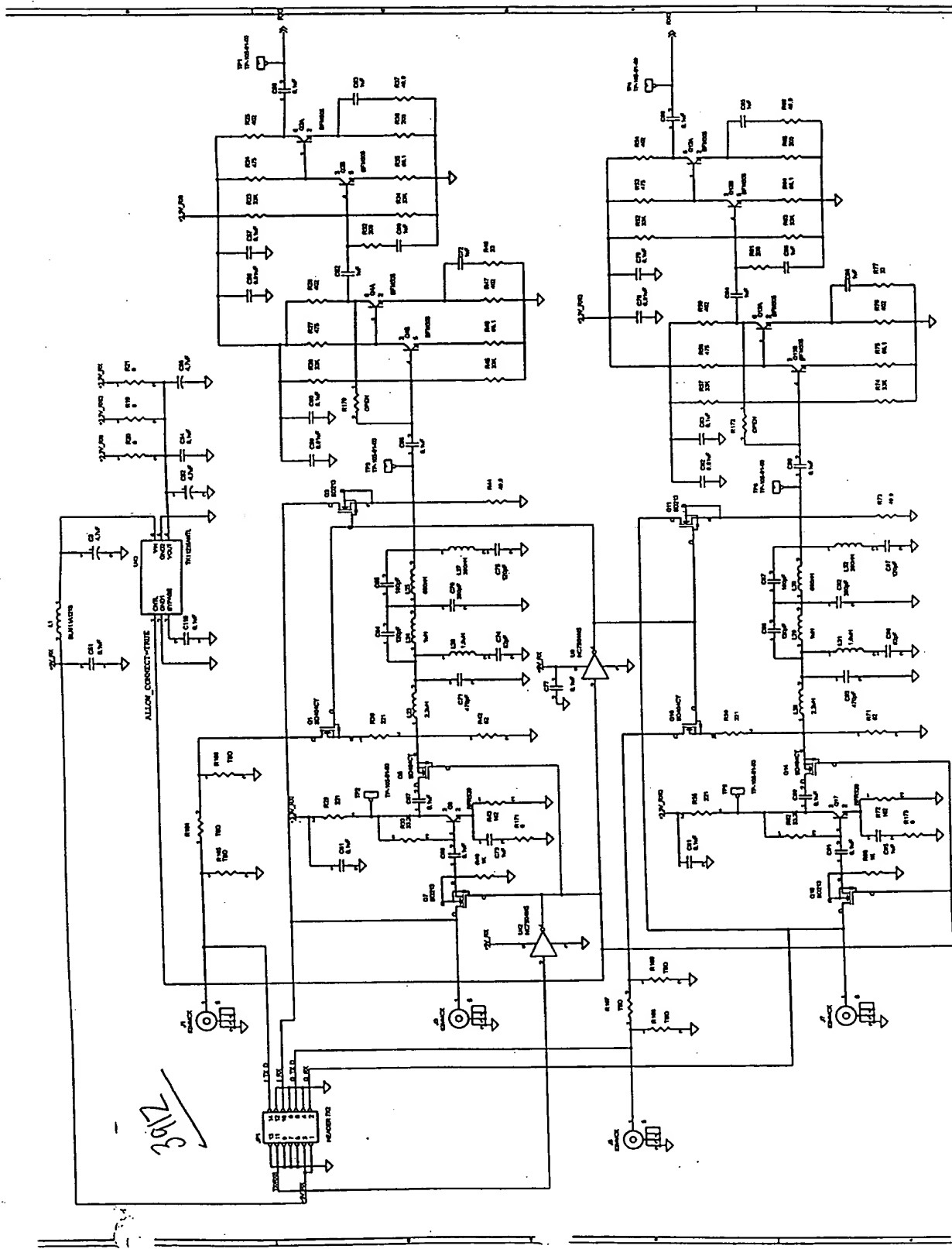
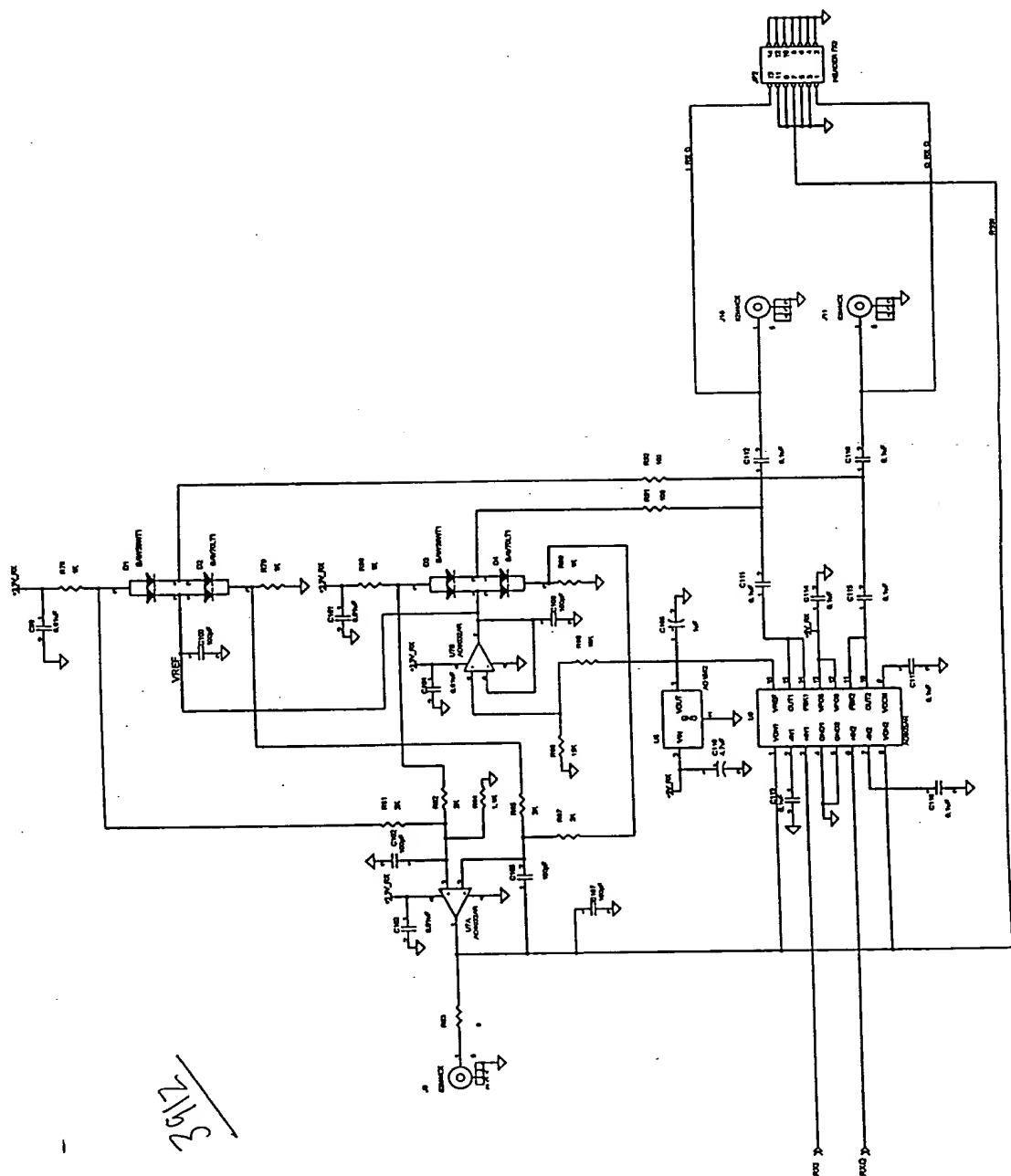


FIG. 50

2/19/2



FT6.51

# Bill Of Materials

Item	Quantity	Reference	Part	Part Number	Manufacturer
1	3	C3,C52,C55	4.7uF	T491A475K006AS	KEMET
2	26	C51,C54,C57,C58,C60,C61, C67,C68,C69,C77,C79,C80, C81,C83,C89,C90,C91,C111, C112,C113,C114,C115,C116, C117,C118,C119	0.1uF	GRM39Y5V104Z016	Murata
3	8	C56,C59,C78,C82,C99,C101, C103,C104	0.01uF	GRM39X7R103K050	Murata
4	10	C62,C63,C66,C72,C73,C84, C85,C88,C94,C95	1uF	GRM40Y5V105Z016	Murata
5	4	C64,C75,C86,C97	120pF	GRM39COG121J050	Murata
6	2	C87,C65	180pF	GRM39COG181J050	Murata
7	2	C70,C92	390pF	GRM39COG391J050	Murata
8	2	C71,C93	470pF	GRM39COG471J050	Murata
9	2	C96,C74	82pF	GRM39COG820J050	Murata
10	5	C100,C102,C105,C106,C107	100pF	GRM39COG101K050	Murata
11	1	C108	1uF		
12	1	C110	4.7uF		
13	2	D3,D1	BAW56WT1	BAW56WT1	Motorola
14	2	D4,D2	BAV70LT1	BAV70LT1	Motorola
15	2	JP2,JP1	HEADER 7X2		
16	6	J1,J3,J5,J7,J10,J11	82MMCX	142-0701-231	Johnson
17	1	J9	82MMCX	82MMCX-50-0-1	Suhner
18	1	L1	BLM11A121S	BLM11A121S	Murata
19	2	L28,L23	2.2uH	LQG21N2R2K10	Murata
20	2	L24,L29	1uH	LQG21N1R0K10	Murata
21	2	L30,L25	680nH	LQG21NR68K10	Murata
22	2	L26,L31	1.8uH	LQG21N1R8K10	Murata
23	2	L27,L32	390nH	LQG21NR39K10	Murata
24	4	Q1,Q5,Q10,Q14	SD404CY	SD404CY	Calogic
25	4	Q2,Q4,Q12,Q13	BFM505	BFM505	Philips
26	4	Q3,Q7,Q11,Q16	SD213	SD213	Calogic
27	2	Q17,Q8	BFR520	BFR505	Philips
28	5	R19,R20,R21,R171,R173	0		
29	8	R23,R26,R34,R45,R52,R57, R63,R74	33K	ERJ3GSYJ333	Panasonic
30	4	R24,R27,R53,R58	475	ERJ3EKF4750	Panasonic
31	6	R25,R28,R47,R54,R59,R76	402	ERJ3EKF4020	Panasonic
32	4	R29,R30,R55,R56	221	ERJ3EKF2210	Panasonic
33	2	R32,R61	200	ERJ3GSYJ201	Panasonic
34	2	R33,R62	33.2K	ERJ3GSYJ333	Panasonic
	4	R35,R46,R64,R75	68.1	ERJ3EKF68R1	Panasonic
	2	R36,R65	200	ERJ3EKF2000	Panasonic

FIG. 52A

37	2	R66,R37	49.9	ERJ3EKF49R9	Panasonic
8	6	R40,R68,R78,R79,R80,R89	1K	ERJ3EKF1001	Panasonic
39	2	R42,R71	62	ERJ3GSYJ620	Panasonic
40	2	R43,R72	162	ERJ3EKF6810	Panasonic
41	2	R44,R73	49.9	ERJ3EKF1001	Panasonic
42	2	R77,R48	33	ERJ3GSYJ330	Panasonic
43	4	R81,R82,R85,R87	2K	ERJ3EKF2001	Panasonic
44	1	R83	0	ERJGSY0R00	Panasonic
45	1	R84	1.1K	ERJ3EKF2001	Panasonic
46	1	R88	15K	ERJ3EKF1502	Panasonic
47	1	R90	10K	ERJ3EKF1002	Panasonic
48	2	R91,R92	100	ERJ3EKF1000	Panasonic
49	6	R164,R165,R166,R167,R168,	TBD		
		R169			
50	2	R170,R172	OPEN		
51	6	TP1,TP2,TP3,TP4,TP5,TP6	TP-105-01-00		
52	2	U42,U6	NC7S04M5		National Semiconductor
53	1	U7	AD8032AR	AD8032AR	Analog Devices
54	1	U8	AD1582	AD1582	Analog Devices
55	1	U9	AD605AR	AD605AR	Analog Devices
56	1	U43	TK11235AMTL	TK11235AMTL	Toko

FIG. 52B

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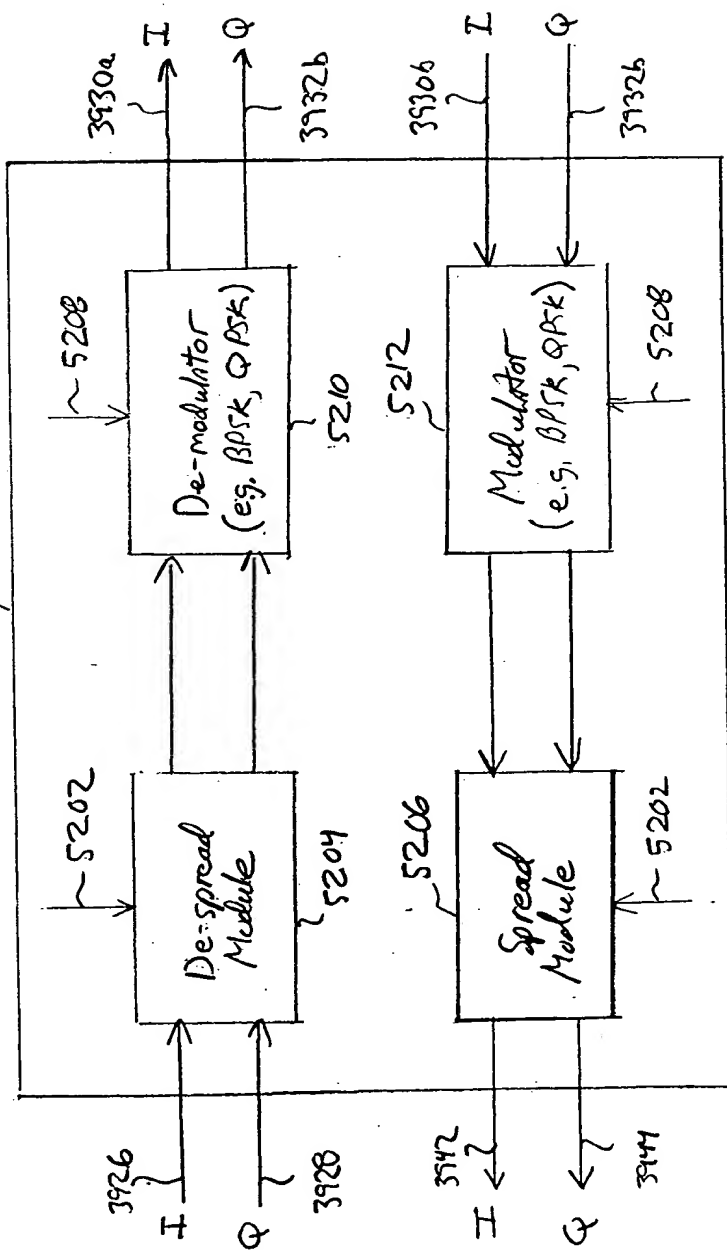
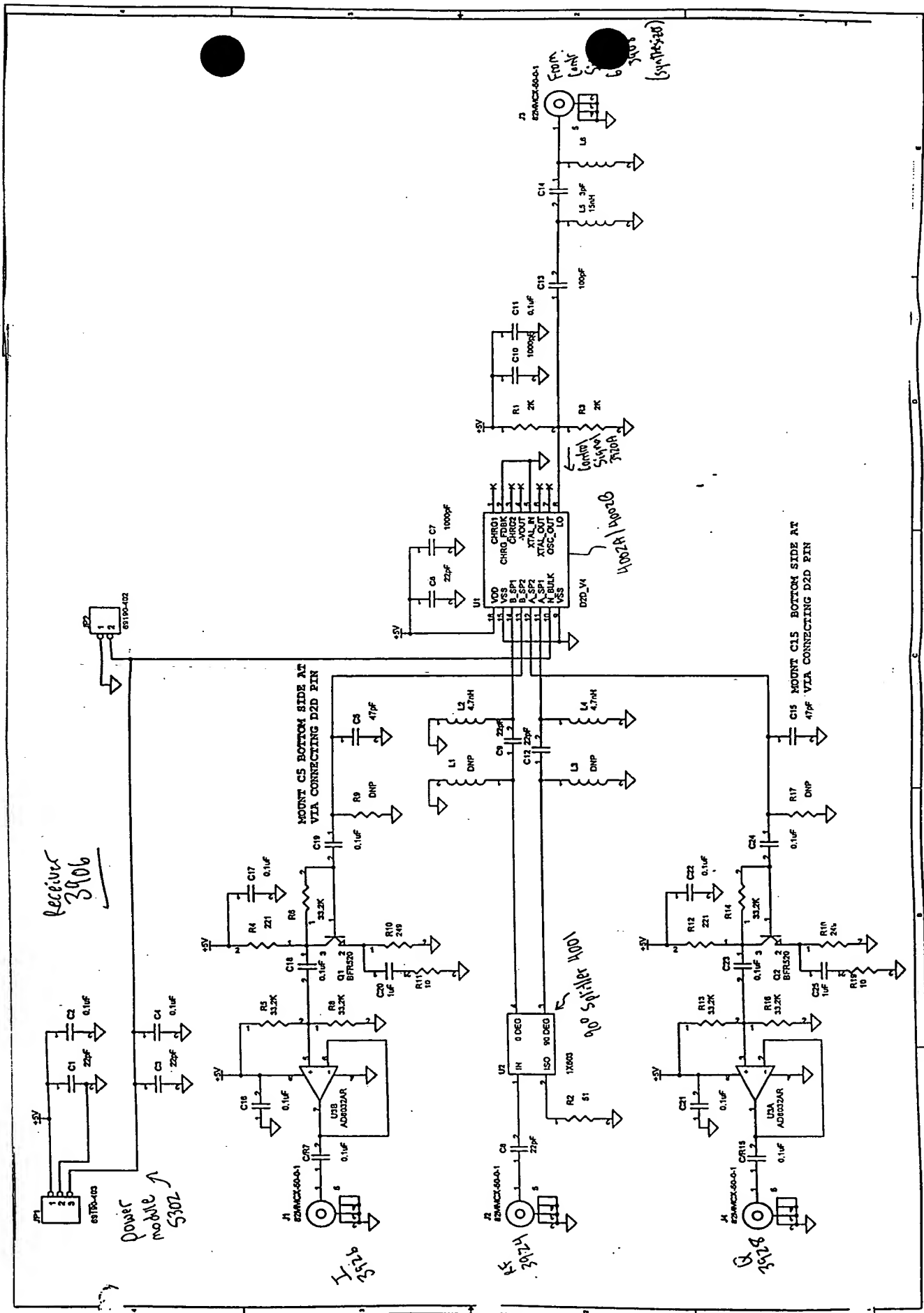


Fig. 52C

Fig. 53



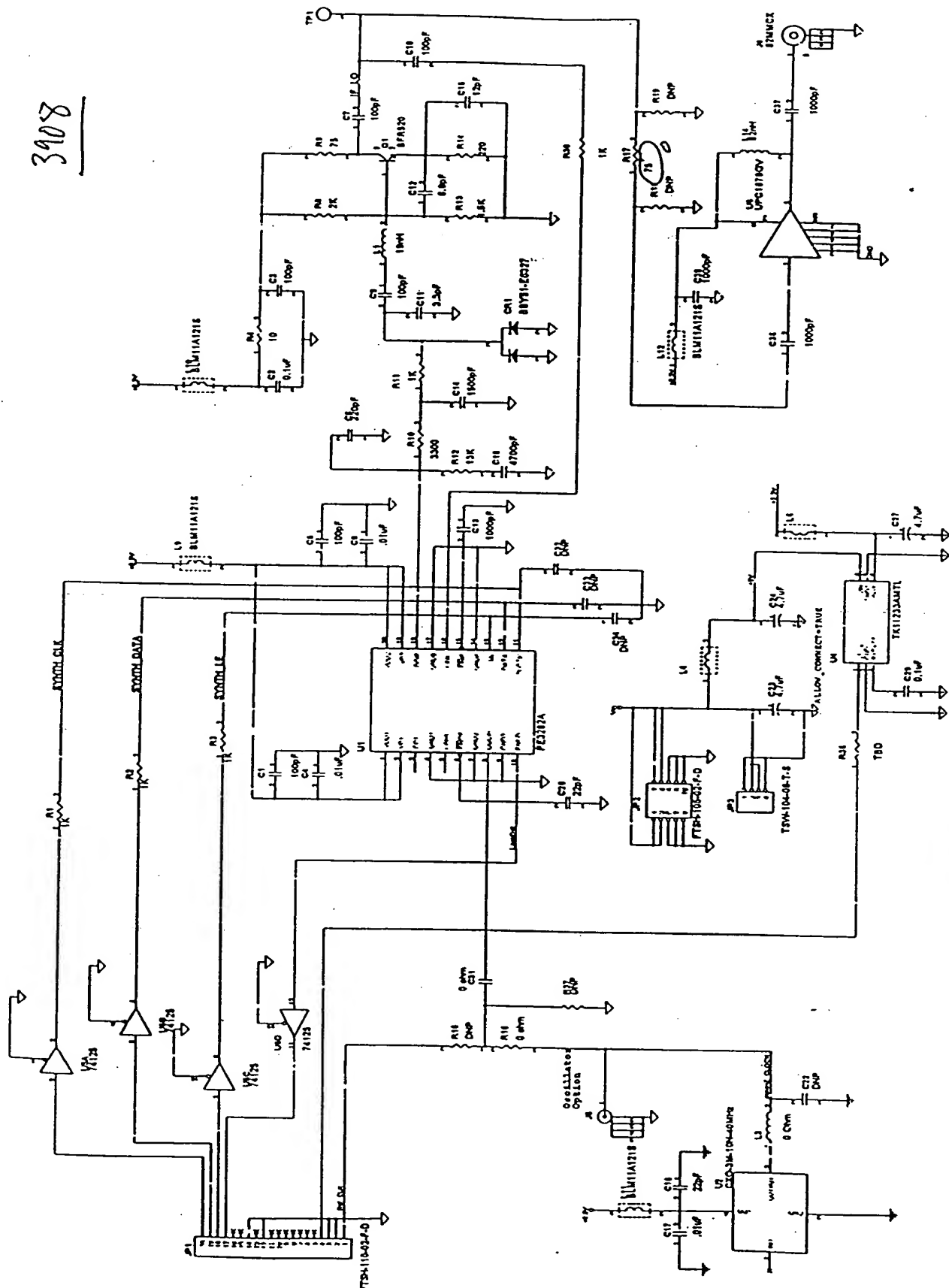
27 /

BaseD 578500.641,001 V03.00

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FT 6.55



Item Qty	Reference	Part	Description	Part Number	Manufacturer
1	CR1	BBY51-E6327	Diode, Varactor	BBY51-E6327	Siemens
2	C1,C3,C5,C7,C9,C10	100pF	Capacitor, ceramic, 100pF, 10%, COG, 0603	GRM38COG101K050	Murata
3	C29,C2	0.1uF	Capacitor, ceramic, .1uF, 10%, X7R, 0603	GRM39X7R104K016AD	Murata
4	C4,C8,C17	.01uF	Capacitor, ceramic, .01uF, 10%, X7R, 0603	GRM39X7R103K050	Murata
5	C6	220pF	Capacitor, ceramic, 220pF, 5%, COG, 0603	GRM39COG221J025	Murata
6	C11	3.3pF	Capacitor, ceramic, 3.3pF, 5%, COG, 0603	GRM39COG3R3B100V	Murata
7	C12	6.8pF	Capacitor, ceramic, 6.8pF, +/- .25pF, COG, 0603	GRM39COG6R8C100V	Murata
8	C13,C35,C36,C37	1000pF	Capacitor, ceramic, 1000pF, 10%, X7R, 0603	GRM39X7R102K016	Murata
9	C14	1500pF	Capacitor, ceramic, 1500pF, 10%, X7R, 0603	GRM39X7R152K016	Murata
10	C15	12pF	Capacitor, ceramic, 12pF, 5%, COG, 0603	GRM38COG15D050	Murata
11	C16	4700pF	Capacitor, ceramic, 4700pF, 10%, 0603	GRM39X7R472K016	Murata
12	C20,C18	22pF	Capacitor, ceramic, 22pF, 10%, COG, 0603	GRM38COG220K050	Murata
13	C22,C32,C33,C34	DNP	Capacitor, ceramic, . . . , 0603		Murata
14	C23,C24,C27	4.7uF	Capacitor, tantalum, 4.7uF, 10%, 3216	T491A475K006AS	Kemet
15	R16,C31, R17	0 ohm	Resistor, zero ohm, 0603	ERJ3GSY0R00	Panasonic
16	JP1	FTSH-110-02-F-D	Header, dual row 10x2, .050x.050	FTSH-110-02-F-D	Samtec
17	JP2	FTSH-105-02-F-D	Header, dual row 5x2, .050x.050	FTSH-105-02-F-D	Samtec
18	JP3	TSW-104-08-T-S	Header, single row 4 pin, .100"	TSW-104-08-T-S	Berg
19	J5,J6	82MMCX	RF Connector	82MMCX-50-0-1	Suhner
20	L1	18nH	Inductor, 18nH, 10%, 0805	0805CS-180XJBC	Colcraft
21	L3	0 Ohm	Zero Ohm Jumper	RM73ZIJT	KOA
22	L4,L6,L9,L10,L11,L12	BLM11A121S	Ferrite Bead, 0603	BLM11A121S	Murata
23	L14	82nH	Inductor, 82nH, 10%, 0805	LL2012-F82NK	Toko
24	Q1	BFR520	Transistor, NPN	BFR520	Philips
25	R1,R2,R3,R11,R30	1K	Resistor, 1K, 5%, 0603	ERJ3GSYJ102	Panasonic
26	R4	10	Resistor, 10 ohm, 5%, 0603	ERJ3GSYJ1R0	Panasonic
27	R8	2K	Resistor, 2K, 5%, 0603	ERJ3GSYJ202	Panasonic
28	R9,R47	75	Resistor, 75 ohm, 5%, 0603	ERJ3GSYJ750	Panasonic
29	R10	3300	Resistor, 3.3K, 5%, 0603	ERJ3GSYJ332	Panasonic
30	R12	13K	Resistor, 13K, 5%, 0603	ERJ3GSYJ133	Panasonic
31	R13	1.5K	Resistor, 1.5K, 5%, 0603	ERJ3GSYJ152	Panasonic

FIG. 56A

32	1	R14	220		Resistor, 220 ohm, 5%, 0603	ERJ3GSYJ221	Panasonic
33	1	R15	DNP		Resistor, zero ohm, 0603	ERJ3GSY0R00	Panasonic
34	2	R18,R19	DNP		Resistor, 91 ohm, 5%, 0603	ERJ3GSYJ910	Panasonic
35	1	R36	TBD		Resistor, zero ohm, 0603	ERJ3GSY0R00	Panasonic
36	1	R37	DNP		Resistor, . . 0603		Panasonic
37	1	TP1	Test Point				
38	1	U1	PE3282A		IC, Synthesizer	PE3282A	Peregrine
39	1	U2	CXO-3M-10N-40MHz		Xtal Osc, 40MHz	CXO-3M-10N-40MHZ A/I	Statek
40	1	U4	TK11233AMTL		Voltage Regulator, 3.5V	TK11235BM	Toko
41	1	U5	74125		IC, BUFFER	MC74LCX125DT	Motorola
42	1	U6	UPC1678GV		IC, RF Amplifier	UPC1678GV	NEC

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Ver. 1.00

FIG. 56B

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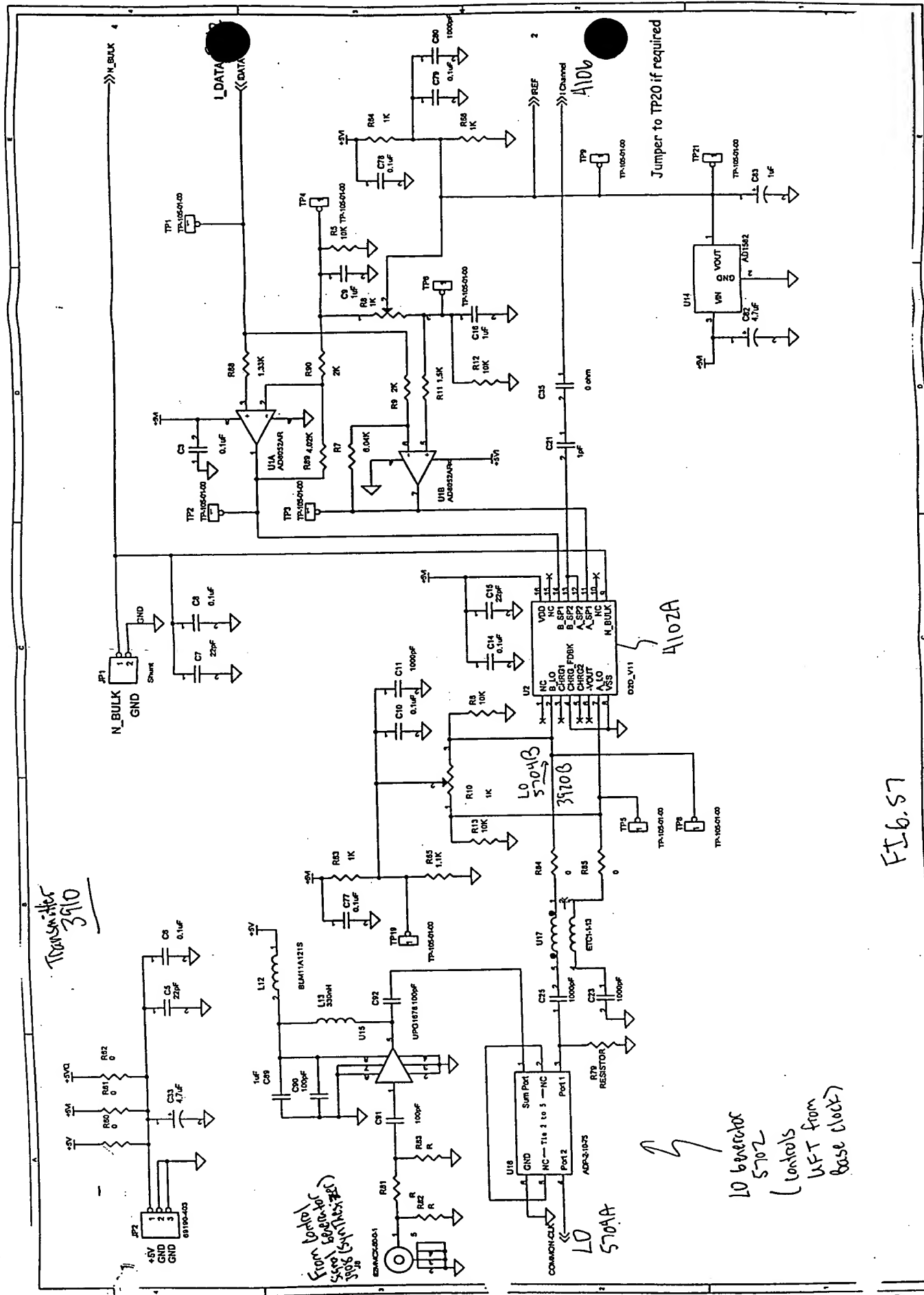
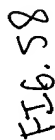


FIG. 57

Data Conditioning  
Interfacing 5802  
(Buffers)



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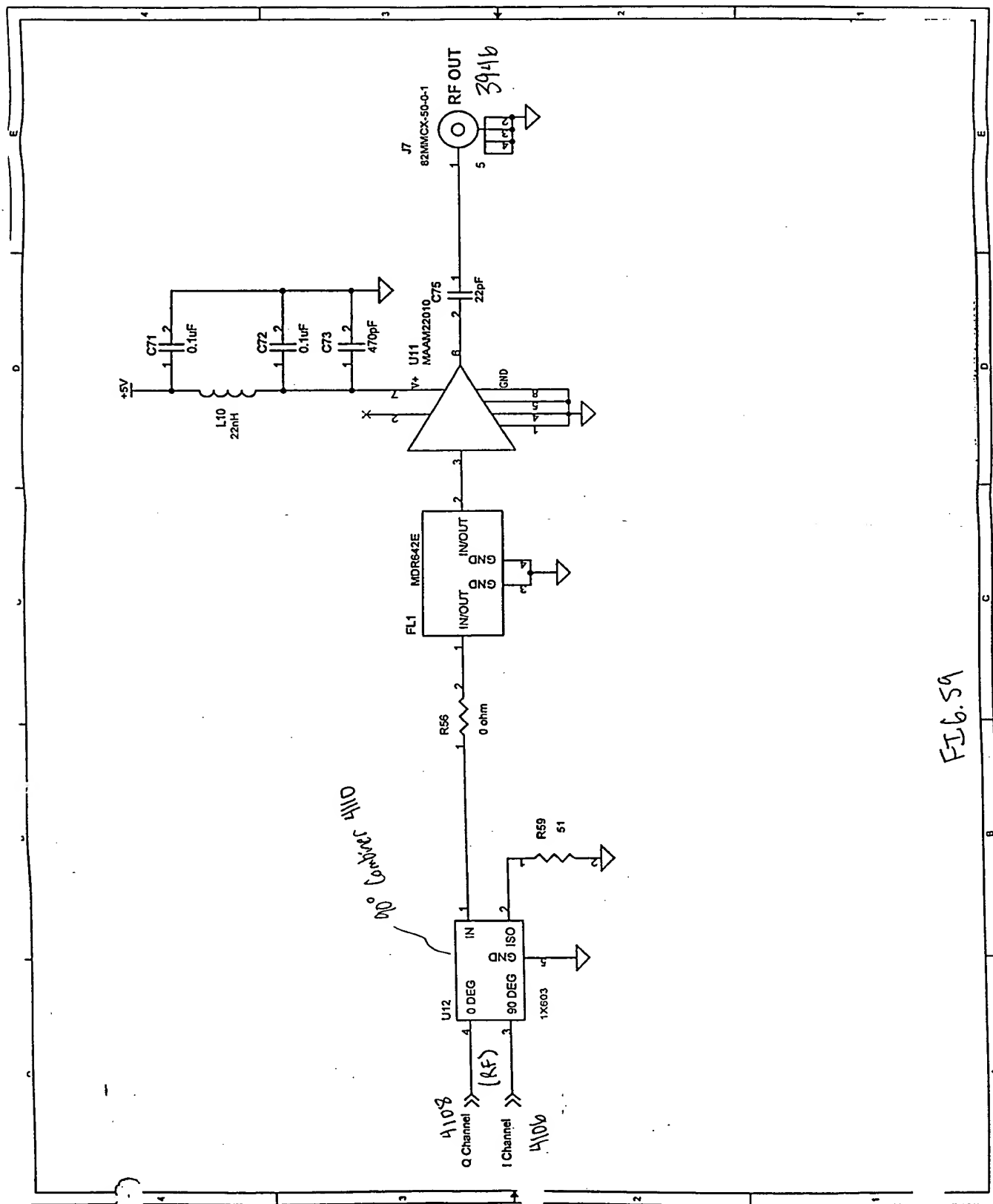


FIG. 59

Place these elements close to U7

Q\_CLK COMMON CLK

FIG. 60

4108

## Bill Of Materials

Item	Quantity	Reference	Part	Part Number	Manufacturer
1	21	C3,C6,C8,C10,C14,C38,C44, C46,C51,C71,C72,C77,C78, C79,C84,C85,C86,C93,C95, C96,C98	0.1uF	GRM39X7R104K016	Murata
2	6	C5,C7,C15,C43,C52,C75	22pF	GRM39COG220J050	Murata
3	5	C9,C16,C45,C53,C89	1uF	GRM40Y5V105Z016	Murata
4	8	C11,C23,C25,C47,C61,C63, C80,C87	1000pF	GRM39X7R102K050	Murata
5	2	C58,C21	1pF	GRM39COG010B50V	Murata
6	2	C82,C33	4.7uF	T491A475K006AS	KEMET
7	2	C59,C35	0 ohm	GRM39COGxxx50V	Murata
8	1	C73	470pF	GRM39COG471J050	Murata
9	1	C83	1uF	T491A105M016AS	Kemet
10	3	C90,C91,C92	100pF	ECU-V1H101JCV	
11	2	C94,C97	0.01uF	GRM39X7R103K016	Murata
12	1	FL1	MDR642E	MDR642E	Soshin
13	1	JP1	Shunt	69190-402	BERG
14	1	JP2	69190-403	69190-403	BERG
15	4	J7,J8,J9,J10	82MMCX-50-0-1	82MMCX-50-0-1	Suhner
16	1	L10	22nH	LL1608-F22NK	Coilcraft
17	1	L12	BLM11A121S	BLM11A121S	Murata
18	1	L13	330nH	LL2012-FR33K	
19	10	R5,R6,R12,R13,R32,R33, R39,R40,R95,R100	10K	ERJ3EKF1002	Panasonic
20	2	R34,R7	6.04K	ERJ3EKF6041	Panasonic
21	4	R8,R10,R35,R37	1K	3224W-1-102	Bourms
22	4	R9,R36,R90,R103	2K	ERJ3EKF2001	Panasonic
23	2	R38,R11	1.5K	ERJ3EKF1501	Panasonic
24	3	R56,R94,R99	0 ohm	ERJ3GSY0R00	Panasonic
25	1	R59	51	ERJ3GSYJ510	Panasonic
26	7	R60,R61,R62,R84,R85,R86, R87	0	ERJ3GSY0R00	Panasonic
27	6	R63,R64,R66,R69,R70,R72	1K	ERJ3EKF1001	Panasonic
28	2	R71,R65	1.1K	ERJ3EKF1101	Panasonic
29	2	R80,R79	RESISTOR		
30	3	R81,R82,R83	R		
31	4	R88,R91,R96,R101	1.33K	ERJ3EKF1331	Panasonic
32	2	R102,R89	4.02K	ERJ3EKF4021	Panasonic
33	2	R92,R97	499	ERJ3EKF4990	Panasonic
34	19	TP1,TP2,TP3,TP4,TP5,TP6,	TP-105-01-00		

FIG. b1A

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		TP8,TP9,TP11,TP12,TP13,			
		TP14,TP15,TP16,TP18,TP19,			
		TP20,TP21,TP22			
35	3	U1,U6,U19	AD8052AR	AD8052AR	Analog Devices
36	2	U7,U2	D2D_V11	D2D_V11	Parker Vision
37	1	U11	MAAM22010	MAAM22010	MACOM
38	1	U12	1X603	1X603	Anaren
39	1	U14	AD1582	AD1582	Analog Devices
40	1	U15	UPG1678	UPG1678GV	NEC
41	1	U16	ADP-2-10-75	ADP-2-10-75	Mini-Circuits

42 1

BOARD

B500.641.021 VDS.10

FIG. 61B

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MOTHER BOARD FOR PCMCIA TEST BED

[illegible]

STBSPD. 641.023 VOL 01

FIG. 6.13

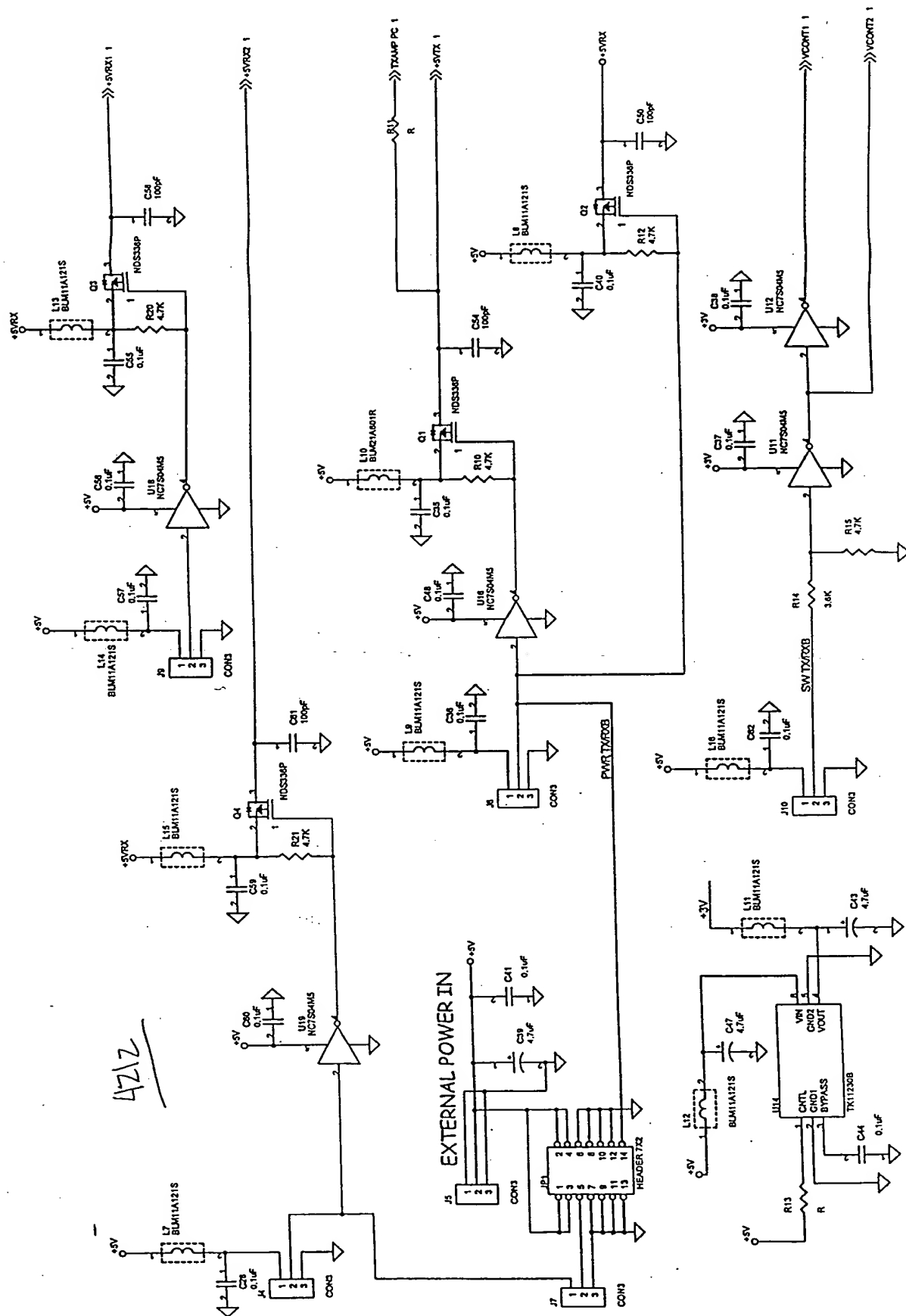
FIG. 64



CONTROL INPUTS		OUTPUT POSITS	
VCONT1	VCONT2	OUT1	OUT2
0	0	OFF	OFF
0	+3	ON	OFF
+3	0	OFF	ON
+3	+3	OFF	OFF

0000005566500

FIG. 65



Item	Qty	Reference	Part	Manufacturer	Part Description	Part Number
1	24	C1,C2,C3,C5,C6,C17,C18,C19,C20,C28,C35,C36,C37,C38,C40,C41,C44,C48,C55,C56,C57,C59,C60,C62	0.1uF	Murata	.1uF,0603,X7R,20%,16V	GRM39X7R104MO16
2	1	C4	330pF	Murata	330pF,0603,COG,10%,50	GRM39COG331K050
3	2	C10,C7	22pF	Murata	22pF,0603,COG,10%,50	GRM39COG220K050
4	4	C8,C9,C23,C24	470pF	Murata	470pF,0603,COG,10%,50	GRM39COG471K050
5	6	C11,C13,C25,C26,C27,C46	10pF	Murata	10pF,0603,COG,10%,50	GRM39COG100K050
6	1	C12	8pF	Murata	8pF,0603,COG,10%,50	GRM39COG080K050
7	8	C15,C16,C21,C22,C50,C54,C58,C61	100pF	Murata	100pF,0603,COG,10%,50	GRM39COG101K050
8	3	C39,C43,C47	4.7uF	Panasonic	4.7 uF tantalum, 16V	ECS-T1CY475R
9	1	C52	33pF	Murata	330pF,0603,COG,10%,50	GRM39COG330K050
10	2	FL1,FL2	MDR642E	Soshin	2.4-2.5GHz BPF	MDR642E
11	1	JP1	HEADER 7X2	Samtec	Dual Row, 7 pins per row	FTSH-107-01-F-D
12	3	J1,J2,J3	82MMCX-50-0-1	Suher	RF Connector	82MMCX-50-0-1
13	6	J4,J5,J6,J7,J9,J10	CON3	Berg	3 pin header w retentive leg	69190-403H
14	2	L10,L1	BLM21A601R	Murata	600 ohms@100MHz, 500 mA Ferrite Bead	BLM21A601R
15	4	L2,L3,L5,L6	22 nH	Colcraft	22nH, 0805CS (2012), 5%	0805CS-220X-BC
16	9	L7,L8,L9,L11,L12,L13,L14,L15,L16	BLM11A121S	Murata	RF Bead	BLM11A121S
17	4	Q1,Q2,Q3,Q4	NDS336P	National	P-Channel FET	NDS336P
18	12	R1,R2,R5,R6,R7,R9,R11,R13,R16,R17,R18,R19	R	Panasonic		
19	2	R3,R4	100	Panasonic	0603, 100, 5%, 1/16 W	ERJ-3GSY-J-101
20	5	R10,R12,R15,R20,R21	4.7K	Panasonic	0603, 4.7K, 5%, 1/16 W	ERJ-3GSY-J-472
21	1	R14	3.6K	Panasonic	0603, 3.6K, 5%, 1/16 W	ERJ-3GSY-J-362
22	1	T1	80 ohm, L=100 mil, W=20 mil		80 ohm, L=100 mil, W=20 mil	
23	1	T2	50 ohm, L=100 mil, W=54 mil		50 ohm, L=100 mil, W=54 mil	
24	1	T3	102 ohm, L=220 mil, W=10 mil		102 ohm, L=220 mil, W=10 mil	
25	1	T4	67 ohm, L=200 mil, W=30.7 mil		67 ohm, L=200 mil, W=30.7 mil	
26	1	T5	100 ohm, L=200 mil, W=10.7 mil		100 ohm, L=200 mil, W=10.7 mil	
27	4	U2,U3,U6,U7	MAAM22010	MACOM	2.4-2.5 GHz LNA	MAAM22010
28	1	U4	UPG152TA	NEC	RF Switch	UPG152TA
29	5	U11,U12,U16,U18,U19	NC7S04M5	National	Inverter	NC7S04M5
30	1	U14	TK11230B	TOKO	Voltage Regulator	TK11230B
31	1	U17	RF2128P	RFMD	Medium Power Linear Amplifier	RF2128P

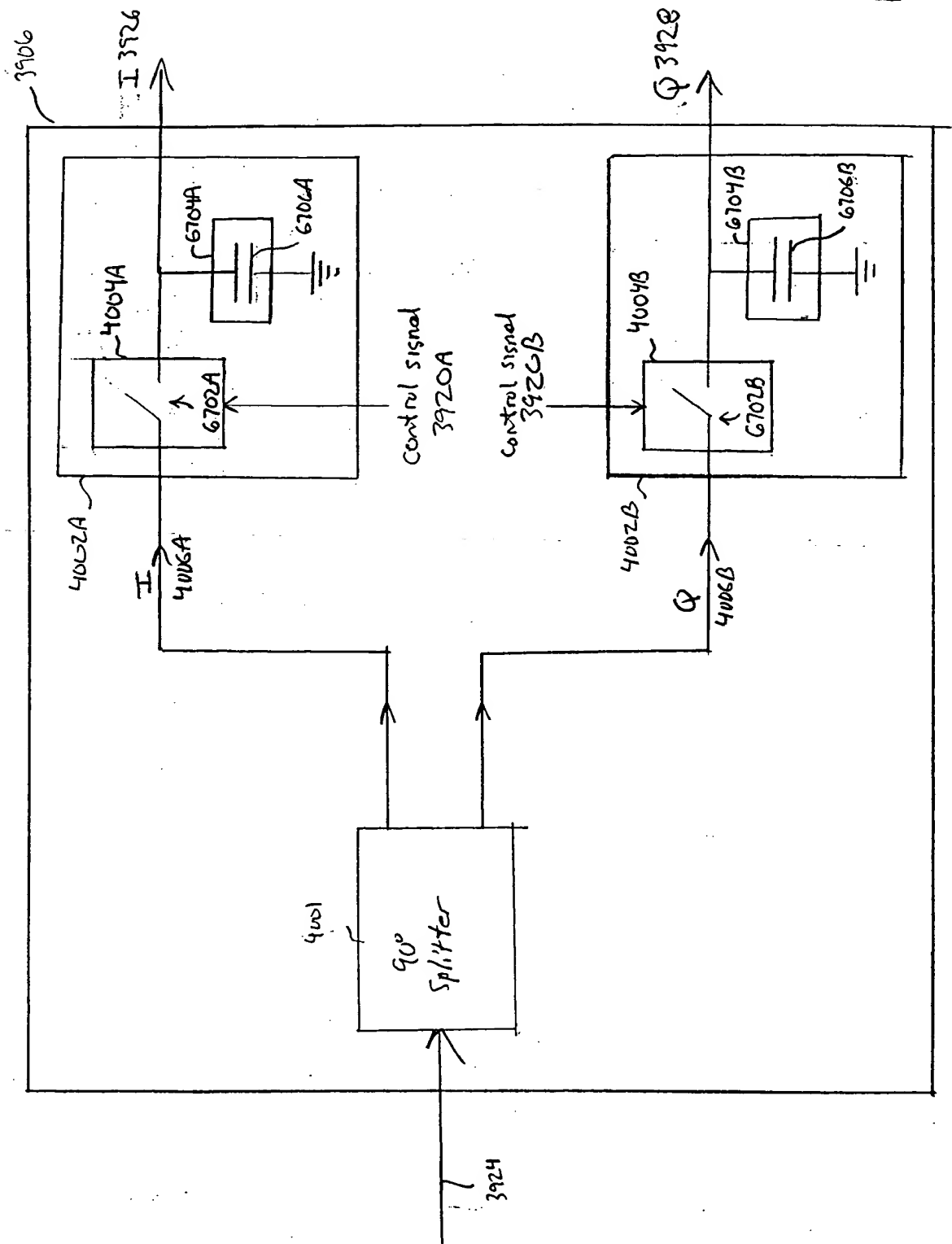
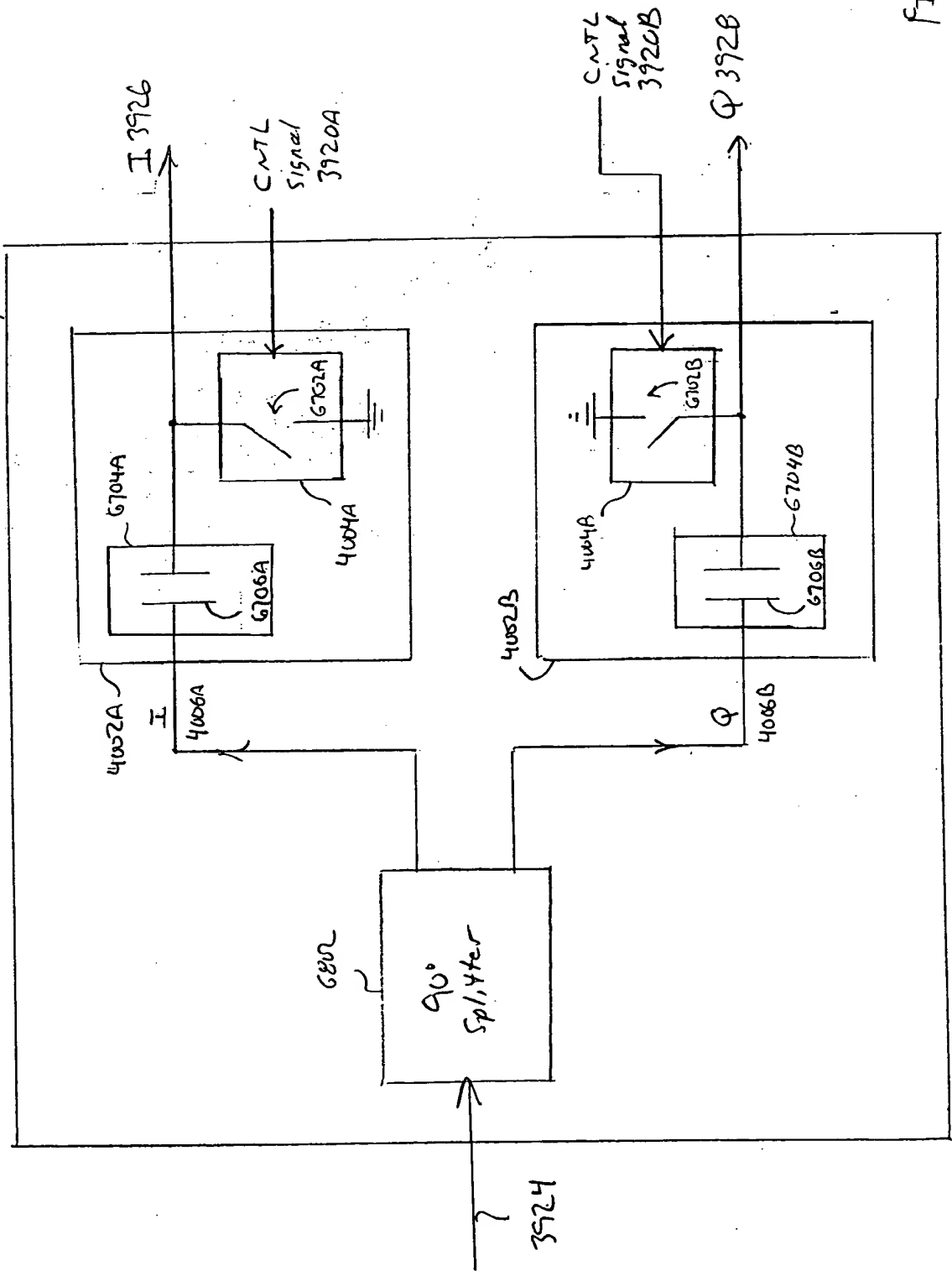


FIG. 67A

001000055822500

3706





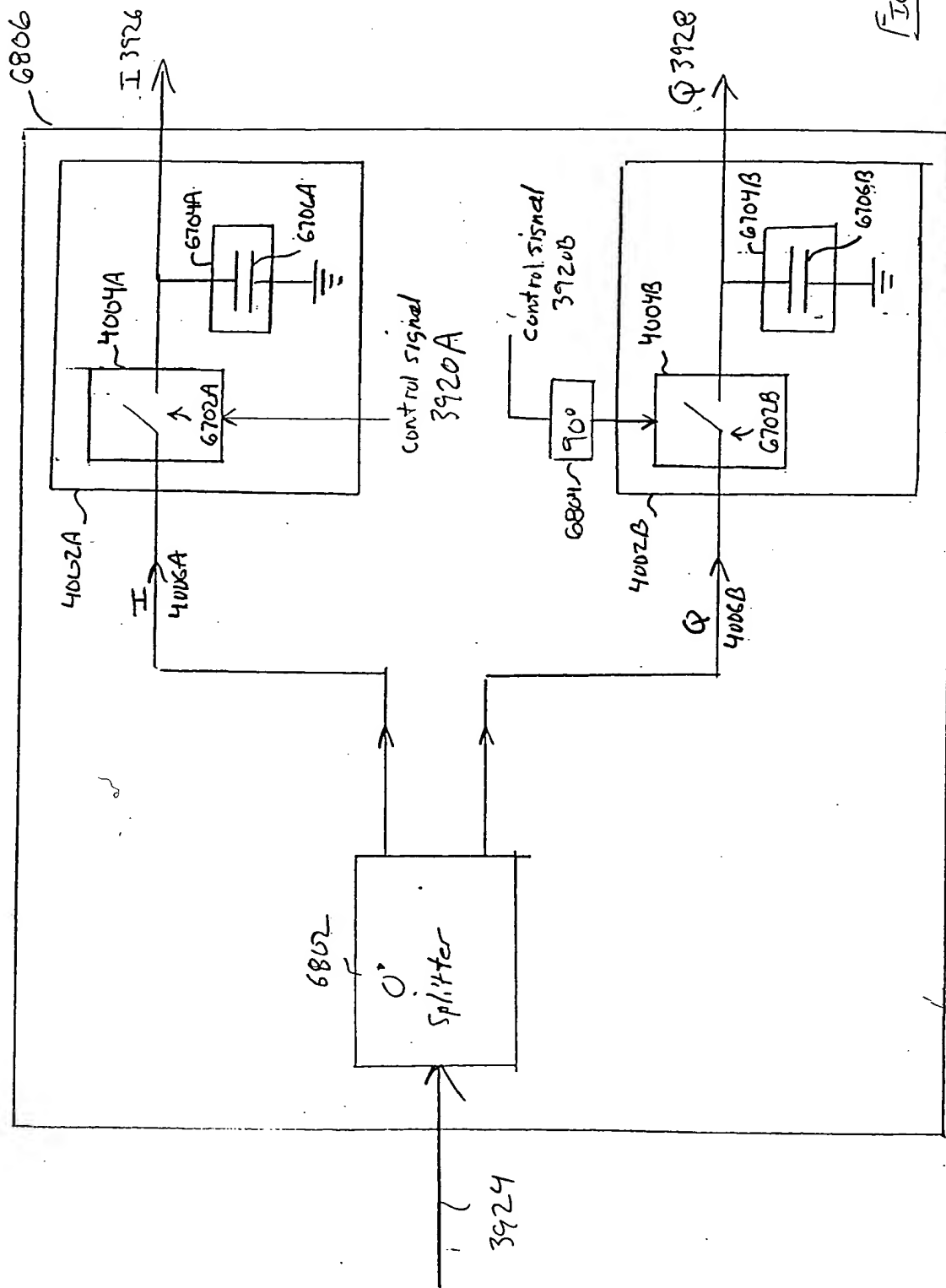


Fig. 68A

44-00000 100 RECYCLED WHITE 5 SQUARE  
42-392 200 RECYCLED WHITE 5 SQUARE  
42-399 200 RECYCLED WHITE 5 SQUARE  
MADE IN U.S.A.

000000 5522500

3706

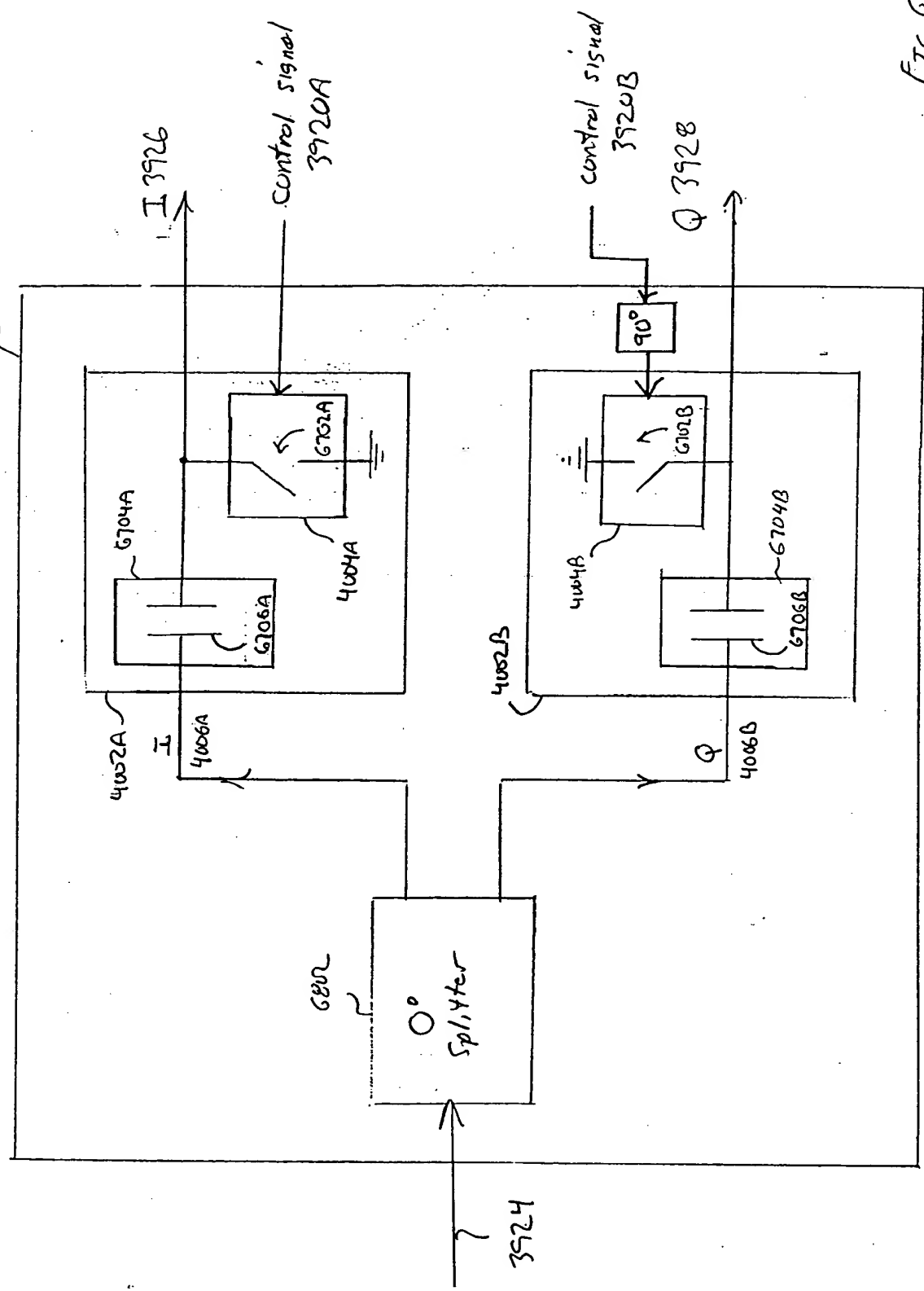
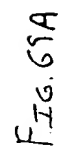


FIG. 68B



3106

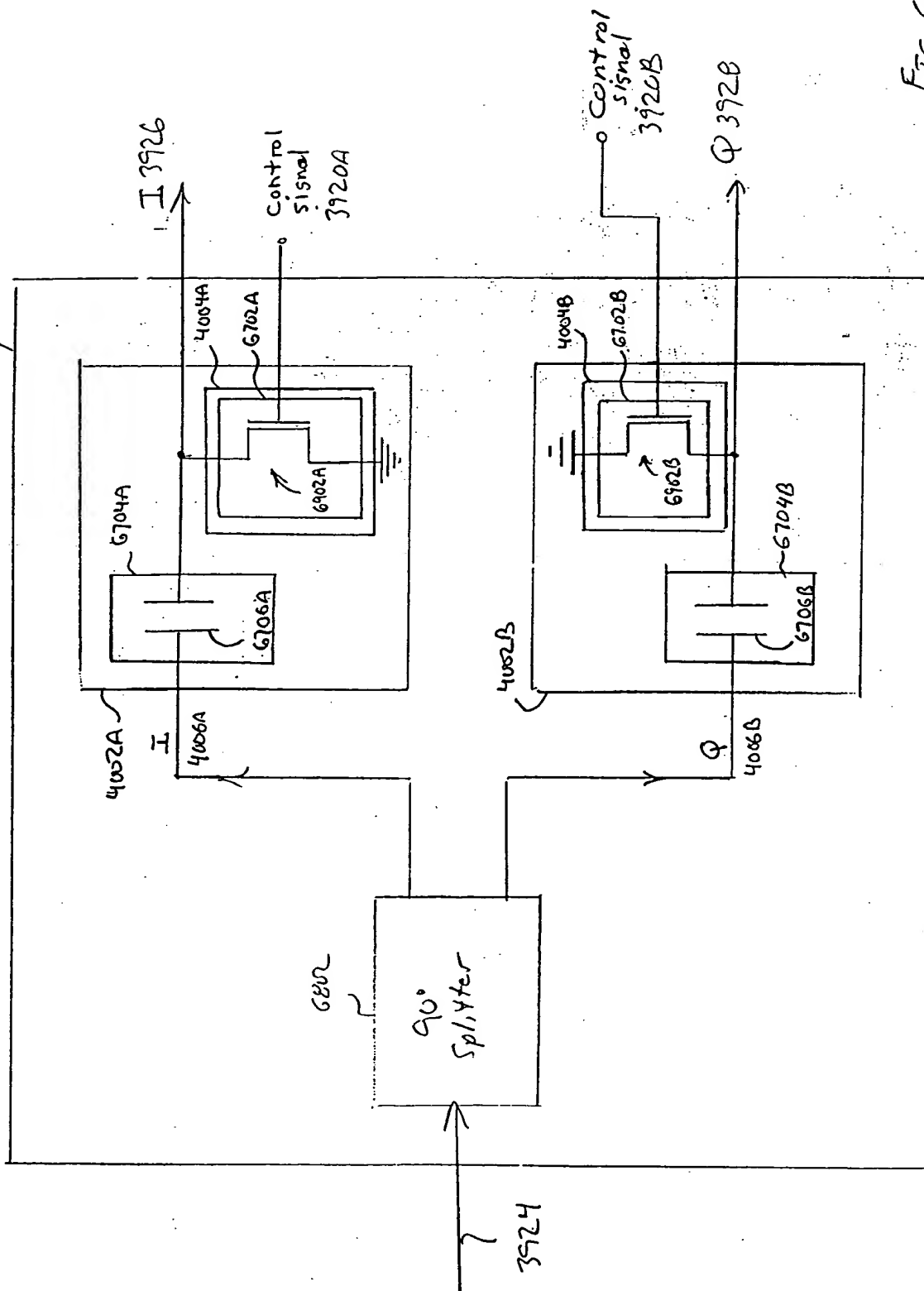


FIG. 69B

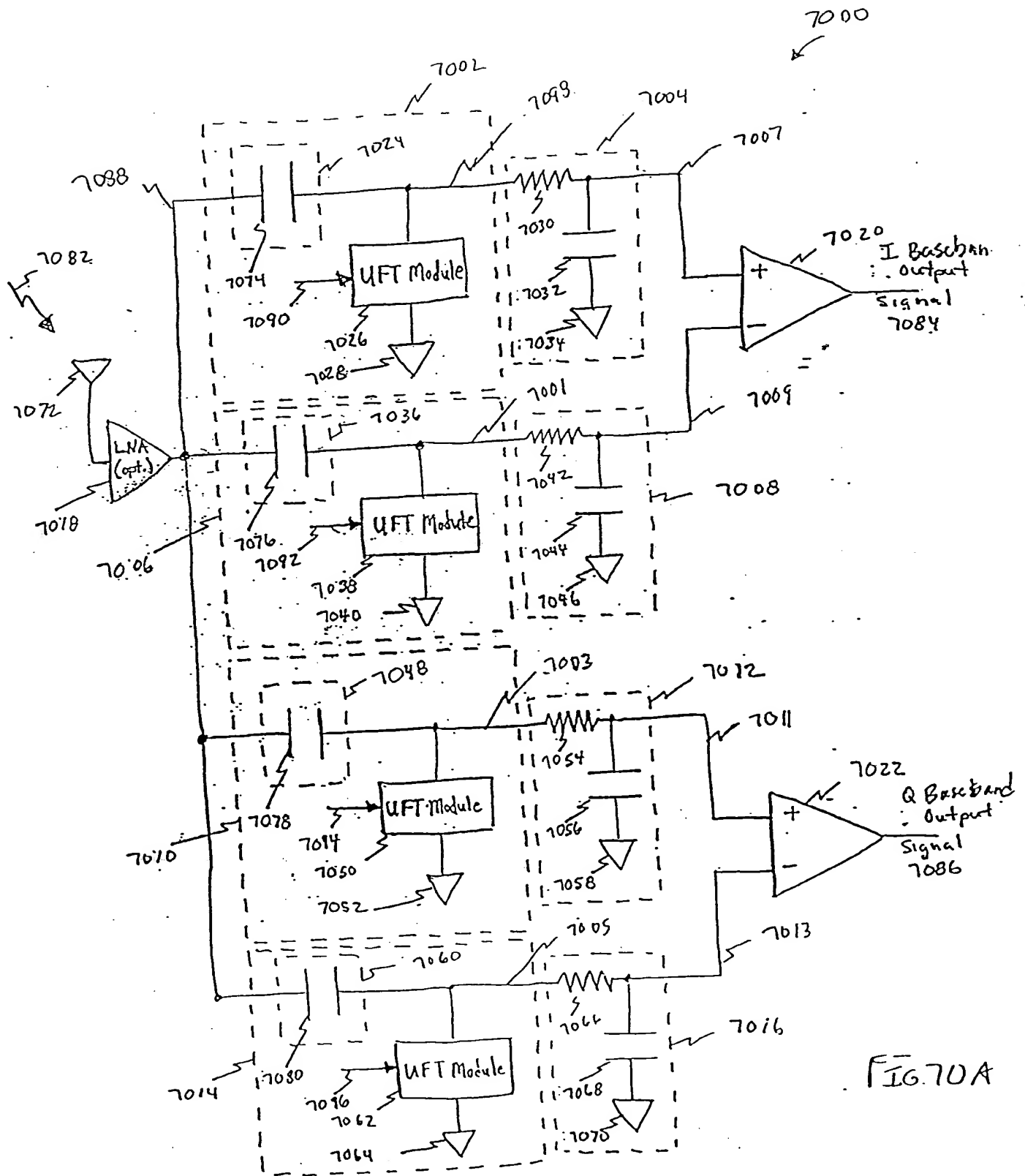


FIG. 70A

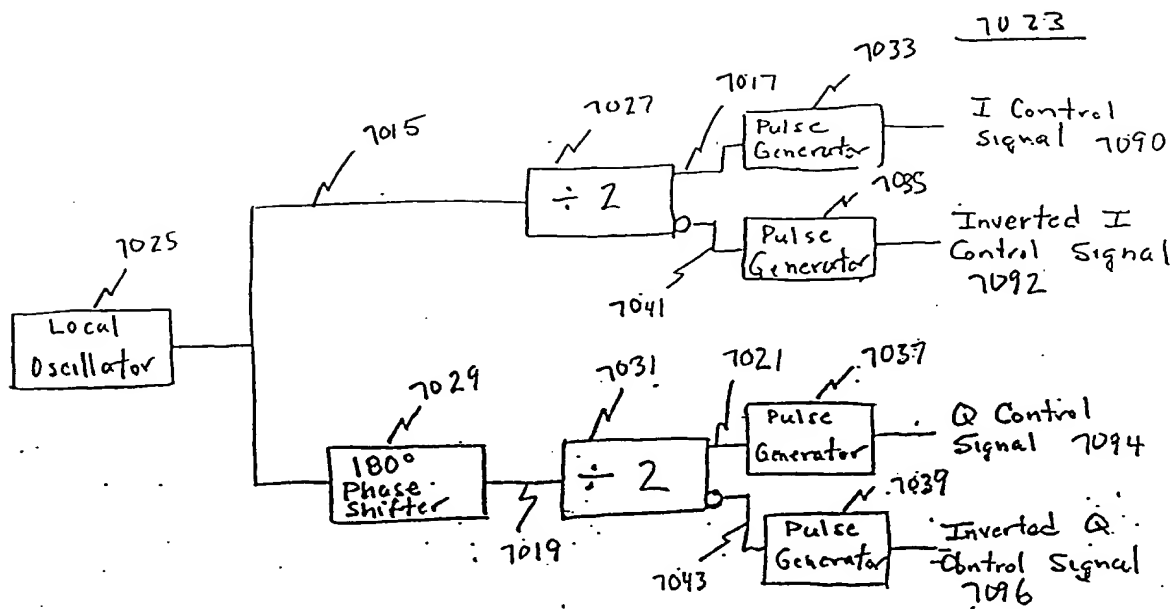


FIG. 70B

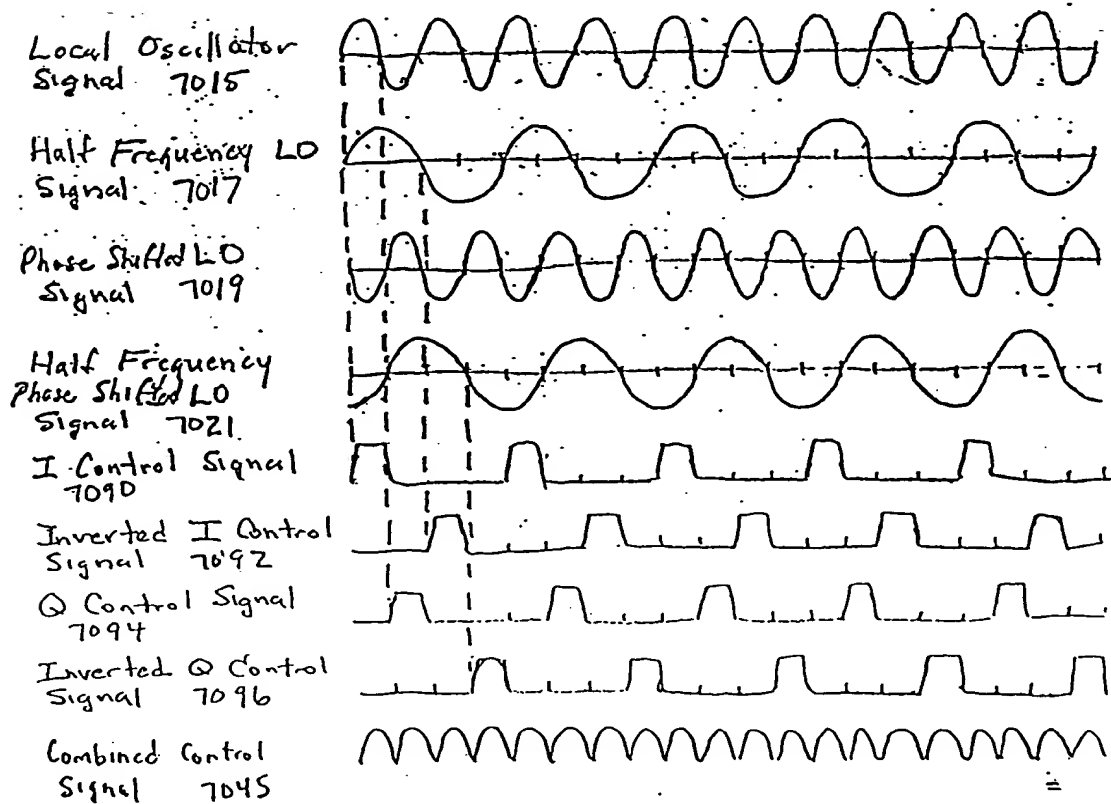


FIG. 70C

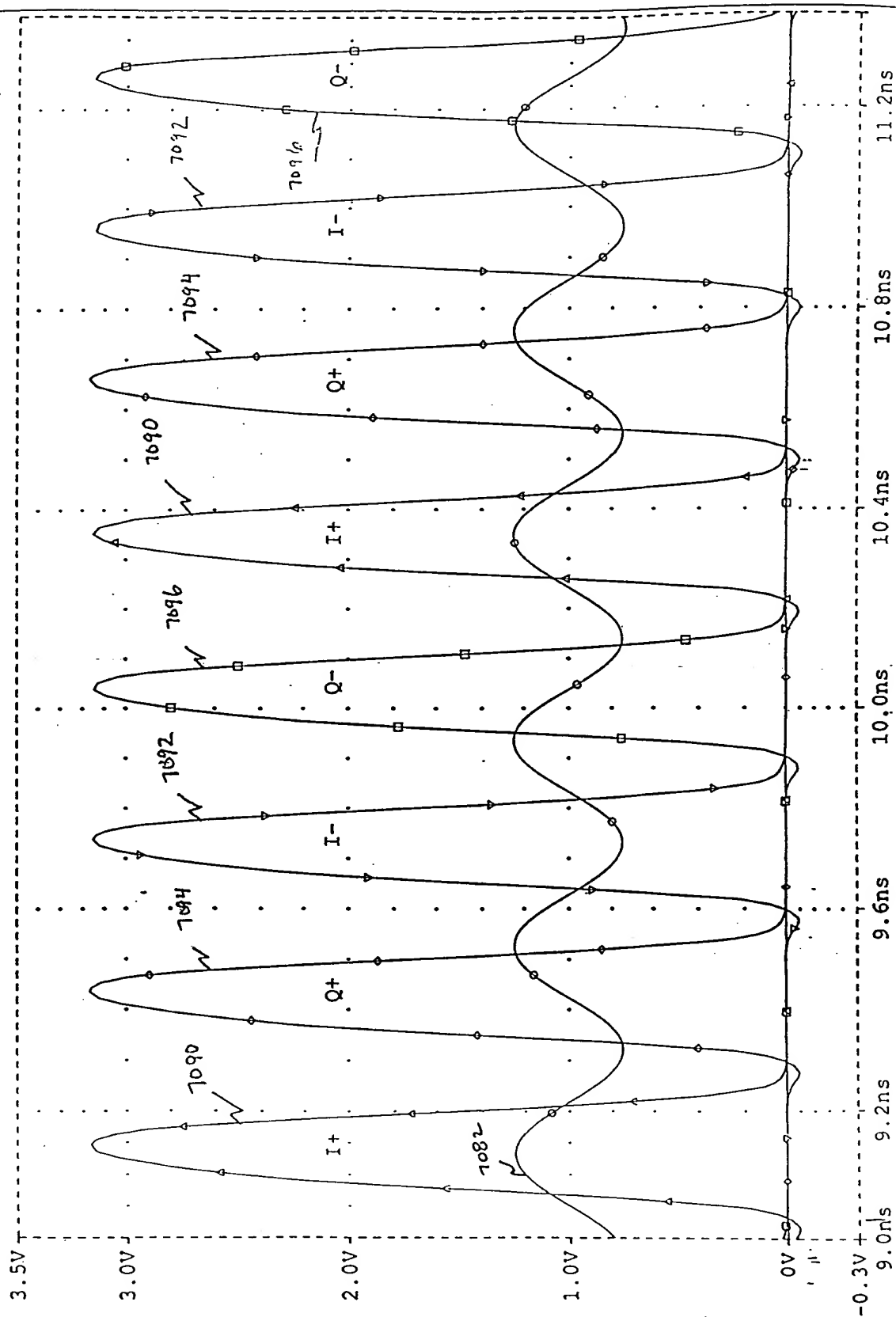


FIG. 70D

21900

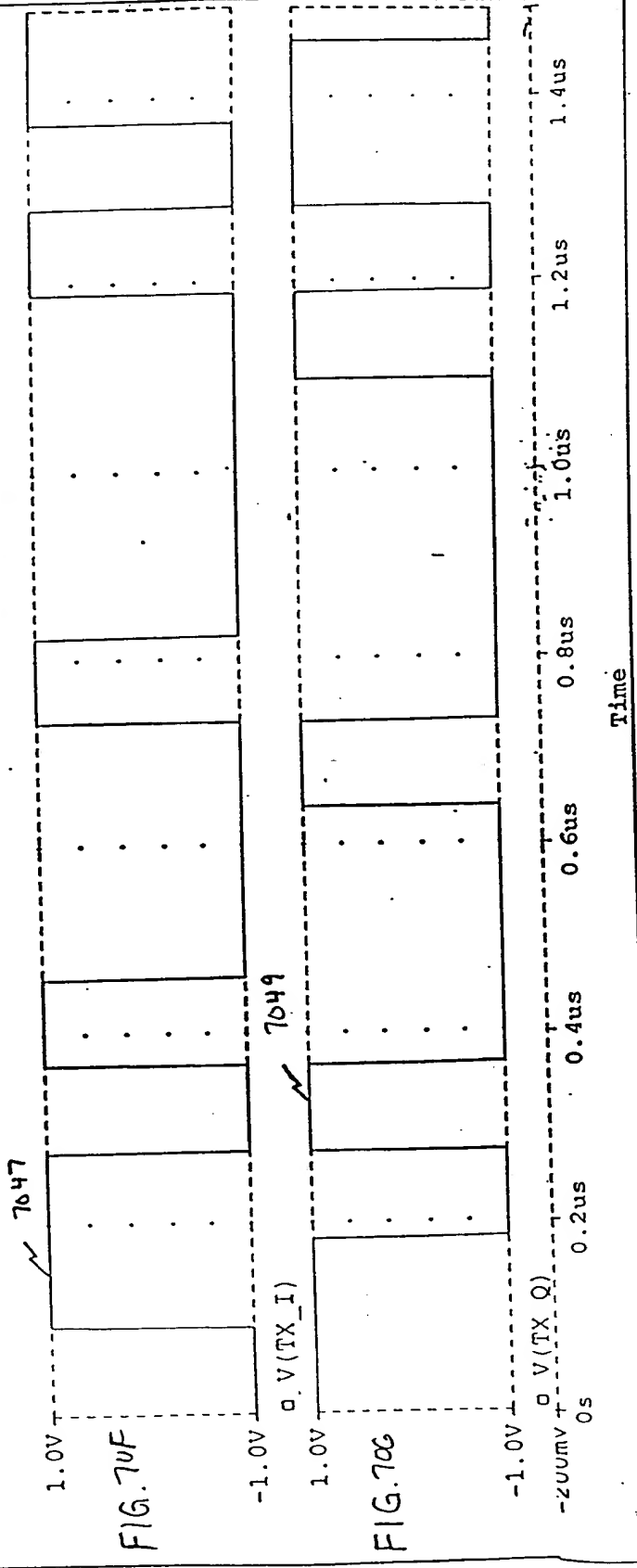


FIG. 70E

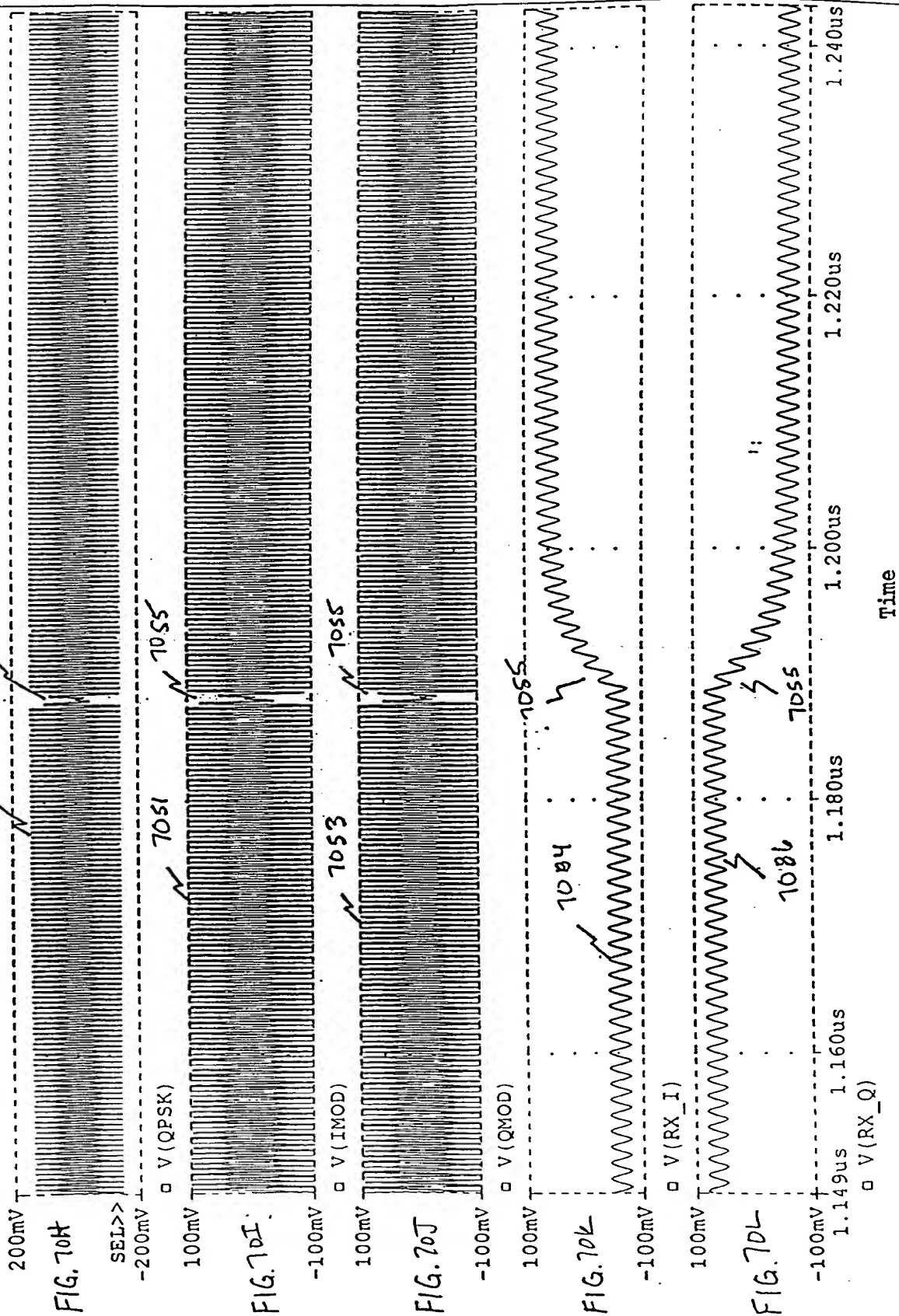


00000055822560

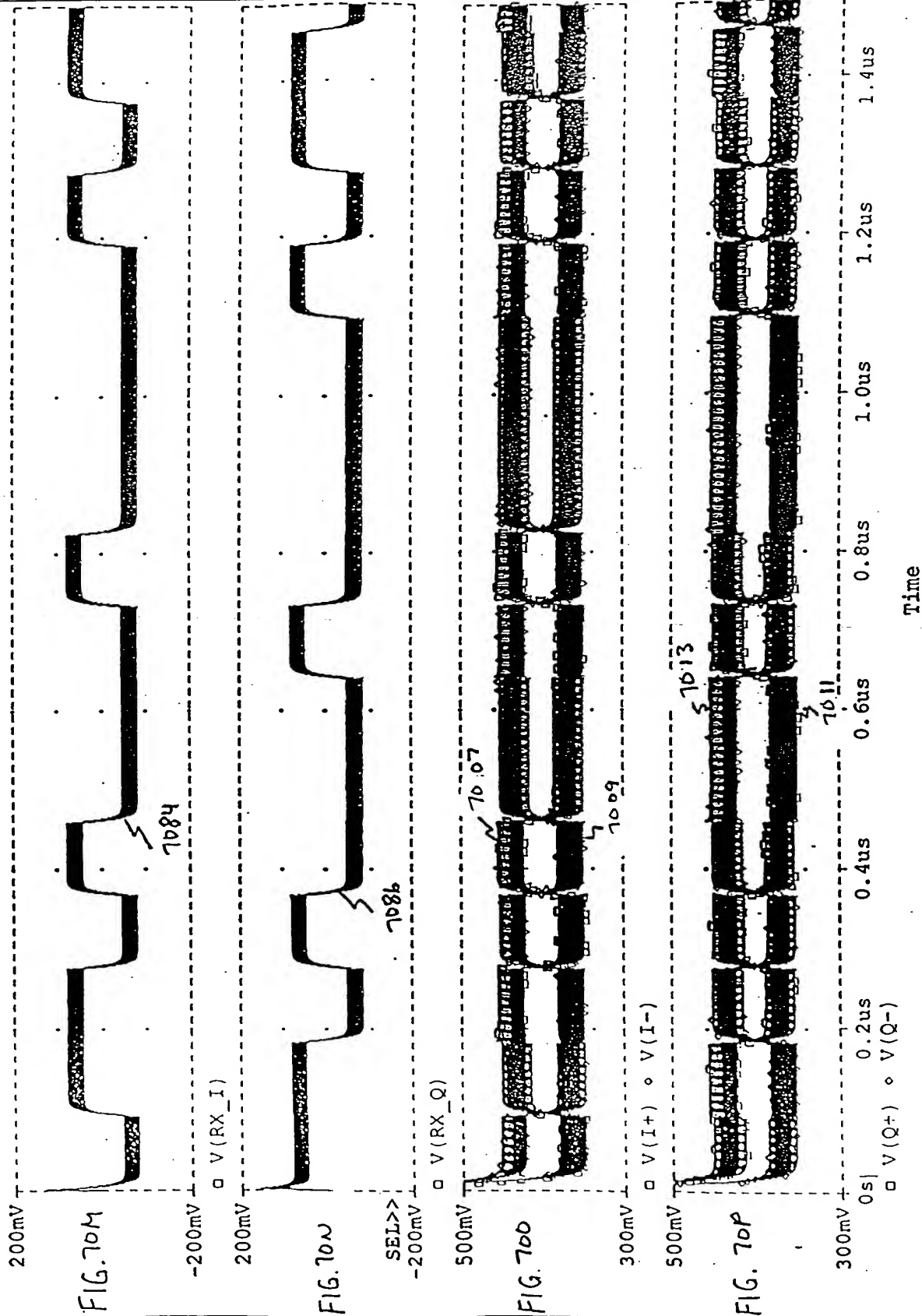
(A) IQDEM0D SHOWING TIME RELATIONSHIP OF TX. I AND Q DATA



(B) IQDEMOD SHOWING QPSK MOD OUTPUT (TOP) WITH IMOD AND QMOD AND I AND Q DATA (BOTTOM)



(B) IQDEM0D RELATIONSHIP OF I AND Q RECEIVED DATA DIFFERENTIAL (BOTTOM) AND SINGLE ENDED AFTER DIFF AMP...



The diagram shows a hand-drawn schematic of a baseband circuit. It features two parallel processing paths, each enclosed in a dashed rectangular box. The top path includes a UFT Module (labeled 7026) and a baseband output signal (labeled 7099). The bottom path includes a UFT Module (labeled 7038) and a baseband output signal (labeled 7099). Both paths are connected to a common input line (labeled 7076) and a common output line (labeled 7020). The circuit is powered by a 7097 supply and includes various control signals (7093, 7095) and feedback loops (7024, 7002, 7004, 7008). The output of the top path is labeled 'Baseband output signal 7099'.

[illegible]

680.7

I Baseband  
Output Signal  
7084

Q Baseband  
Output Signal  
7086

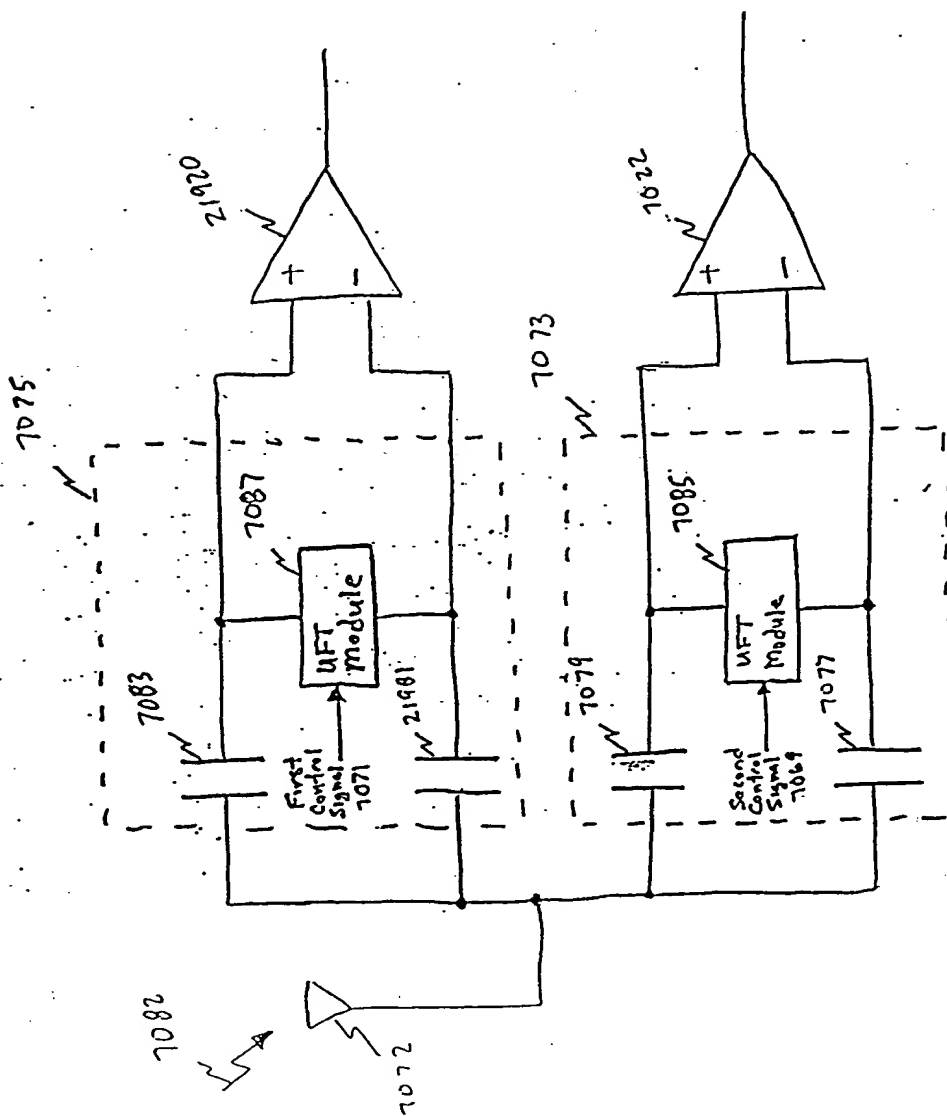
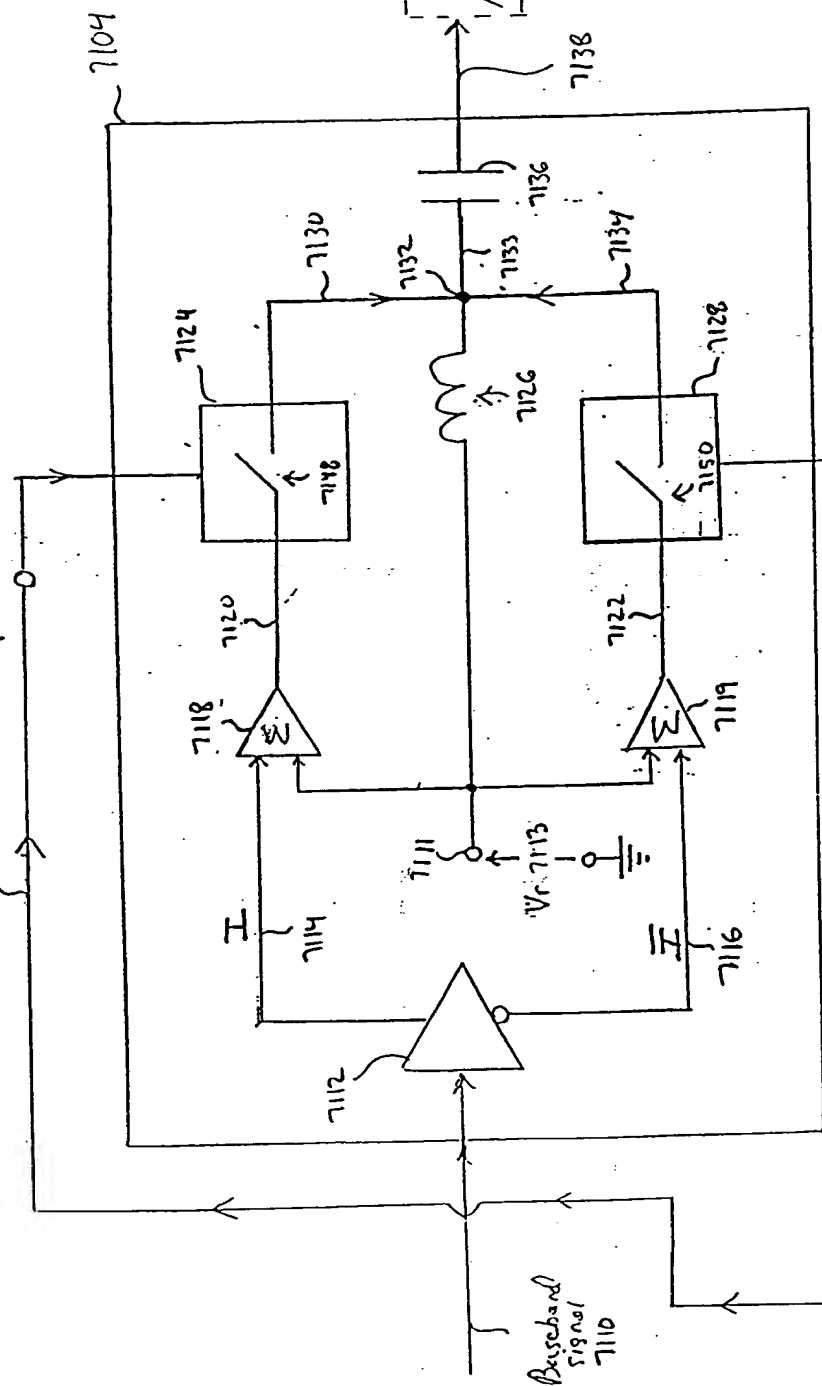


FIG. 70 R

FIG. 70S

2017

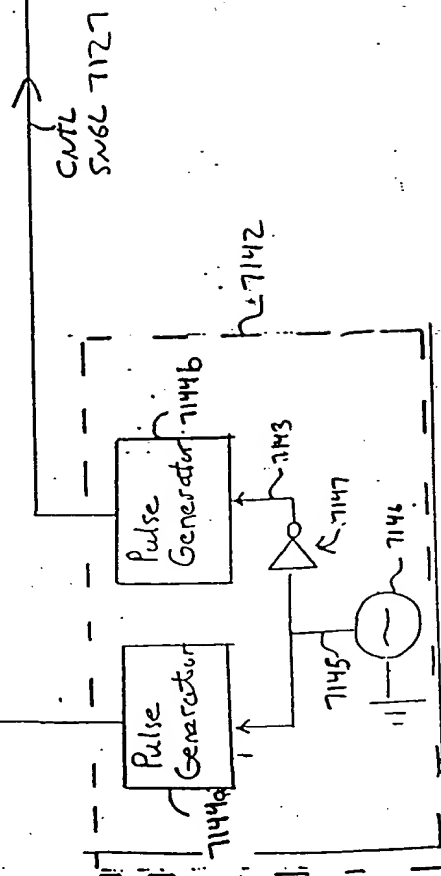


Output. lensis Chile

A

golf

Fig. 71A



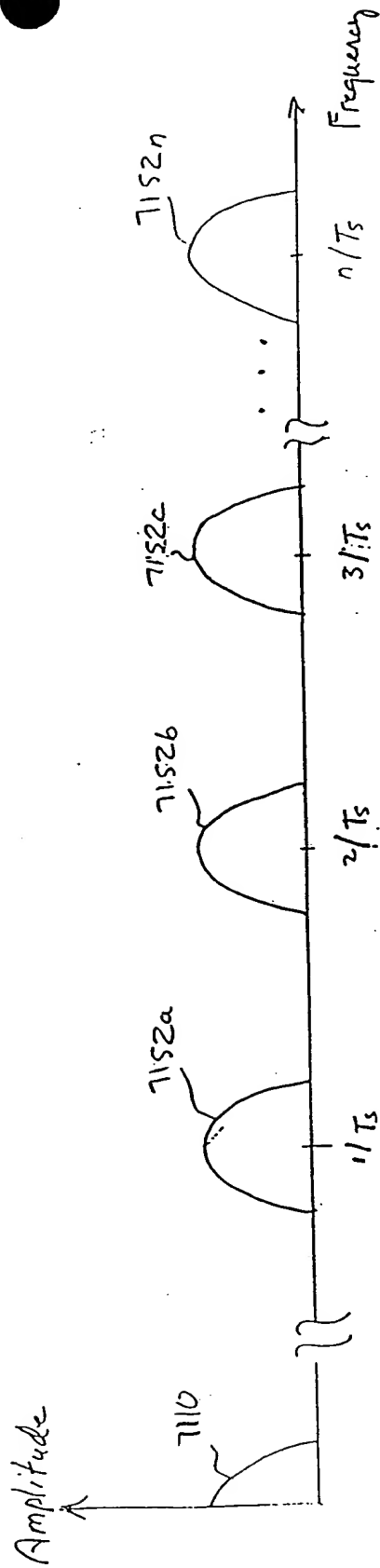


FIG. 71B



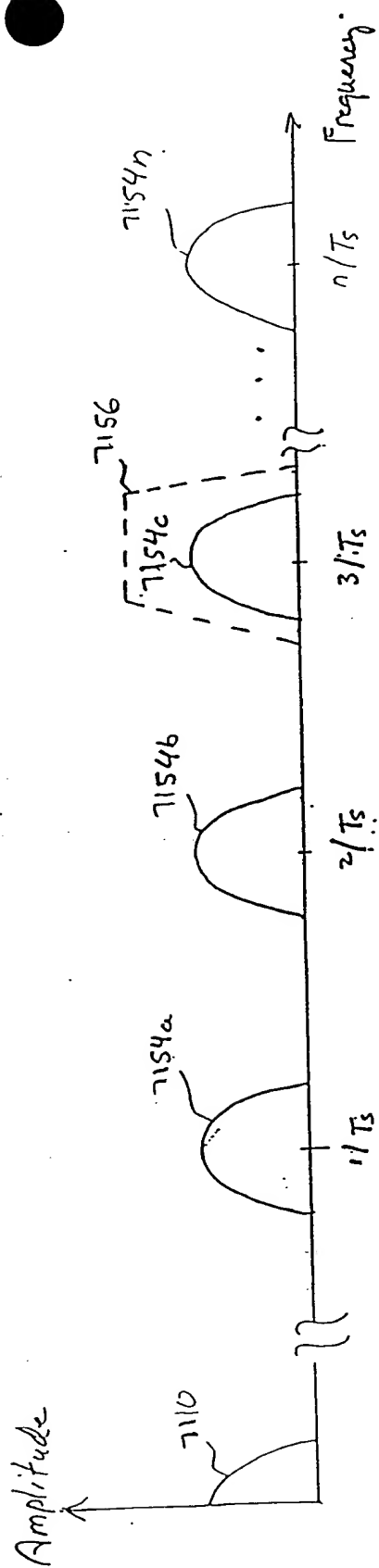


FIG 71C

001000 5522560

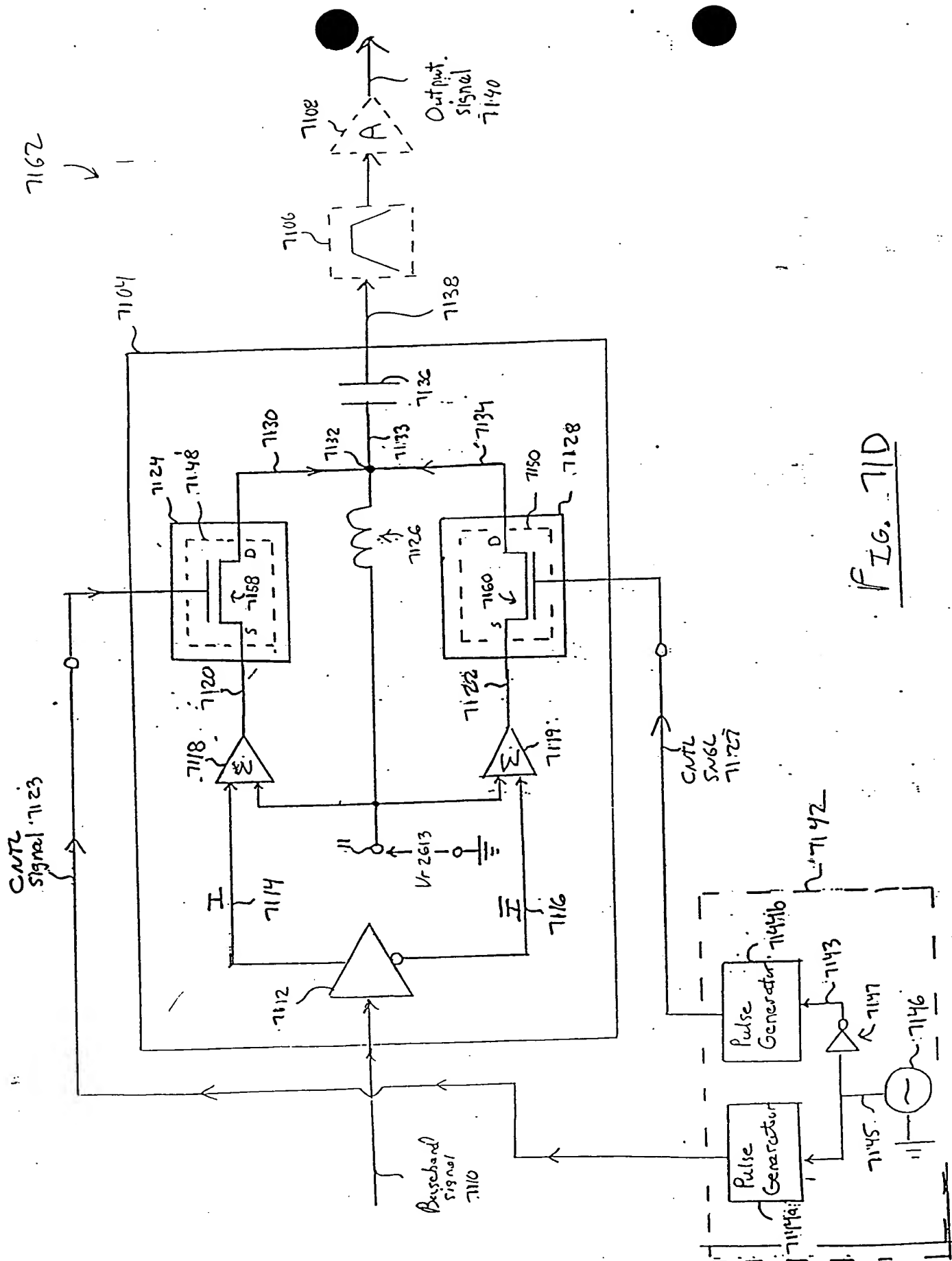


Fig. 71D

FIG. 72A

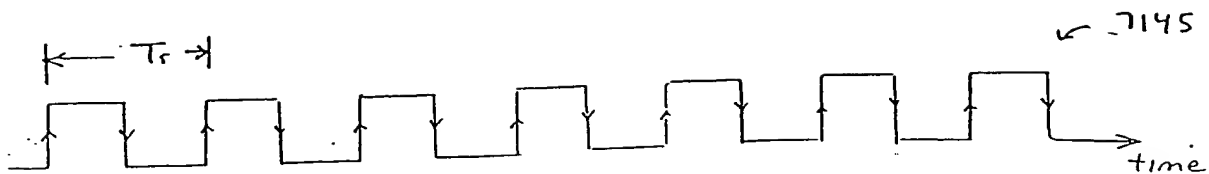


FIG. 72B

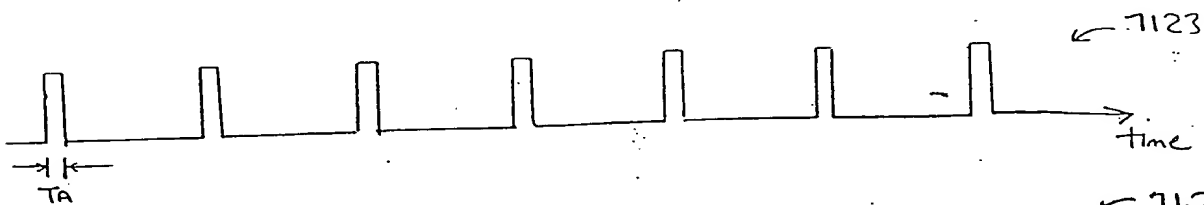


FIG. 72C



FIG. 72D

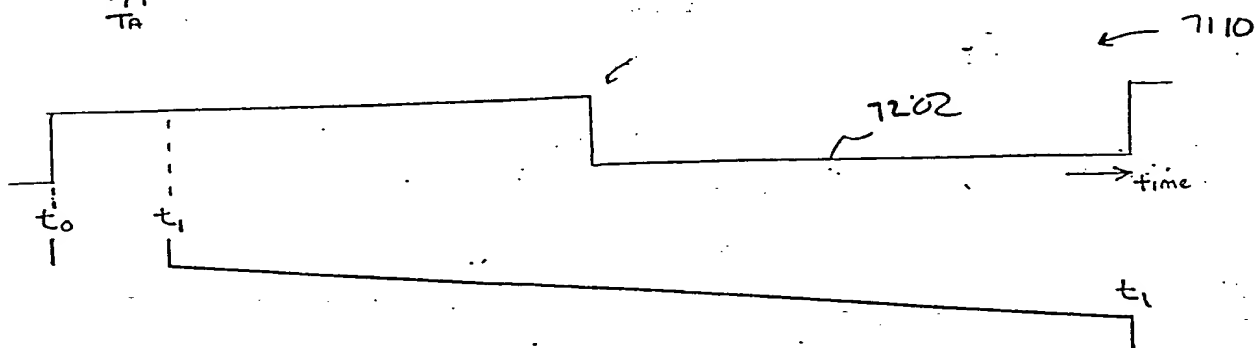


FIG. 72E

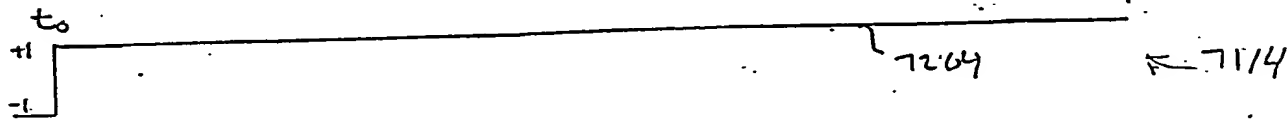


FIG. 72F



FIG. 72G

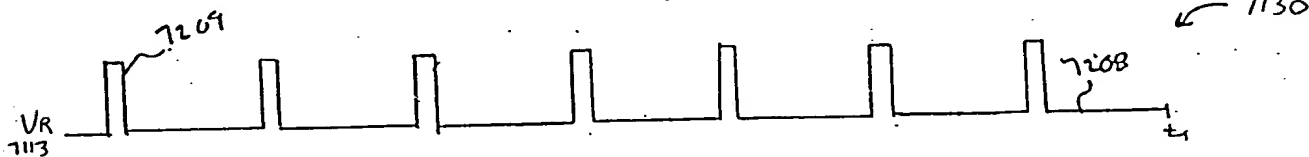
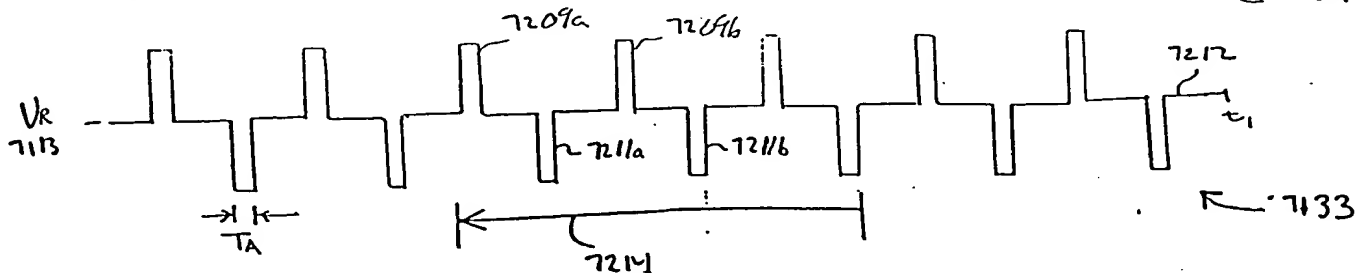


FIG. 72H



FIG. 72I



00000 99999 300

Square Wave Frequency = 200Mhz

Aperture = 500ps

Fundamental Clock = 200Mhz (5<sup>th</sup> Subharmonic)

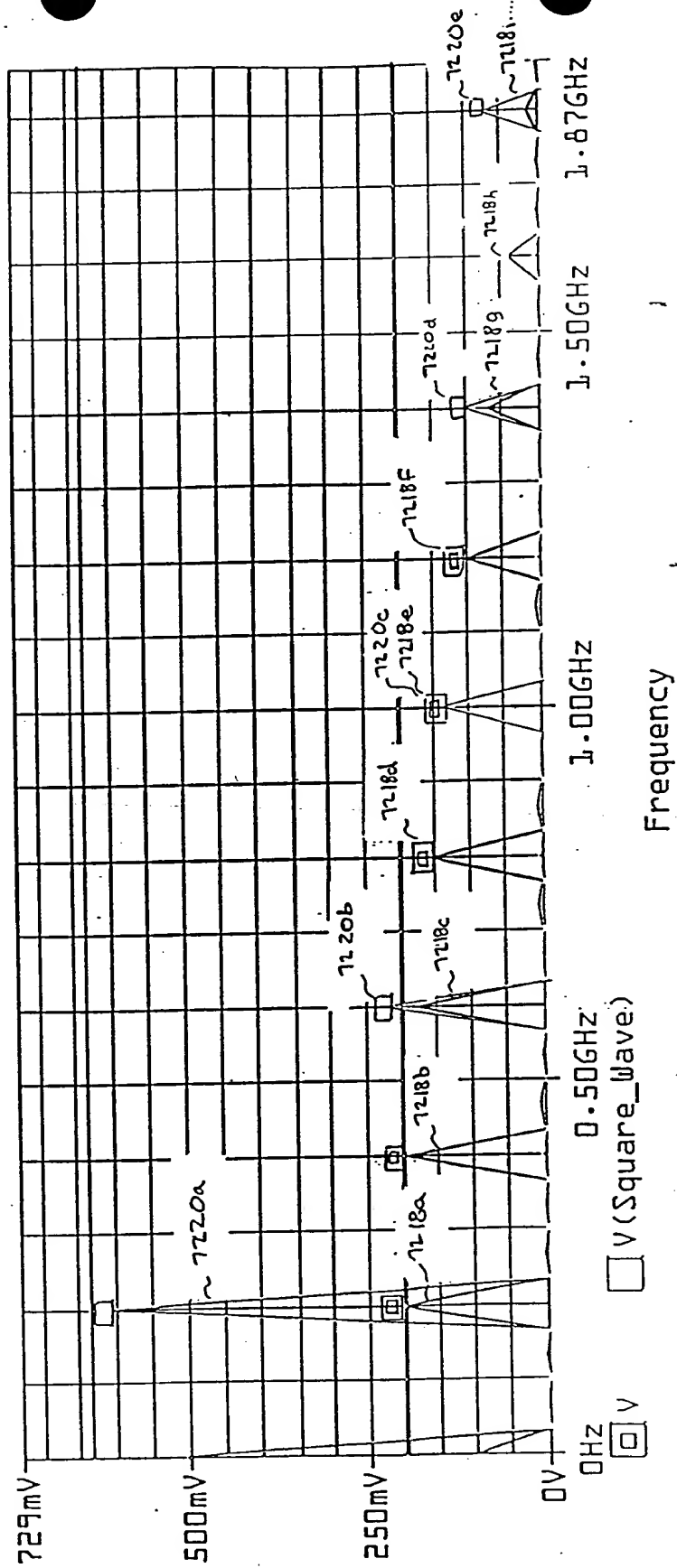
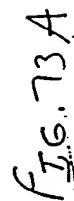


FIG. 72J

7352



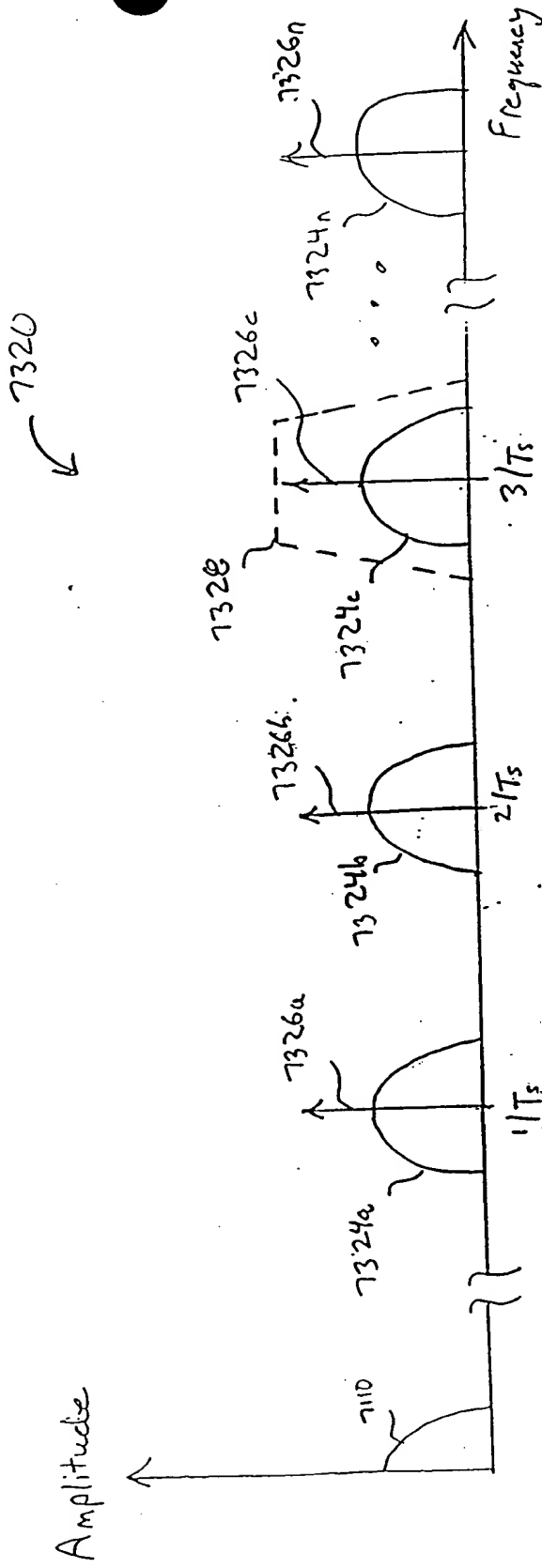


FIG. 13B

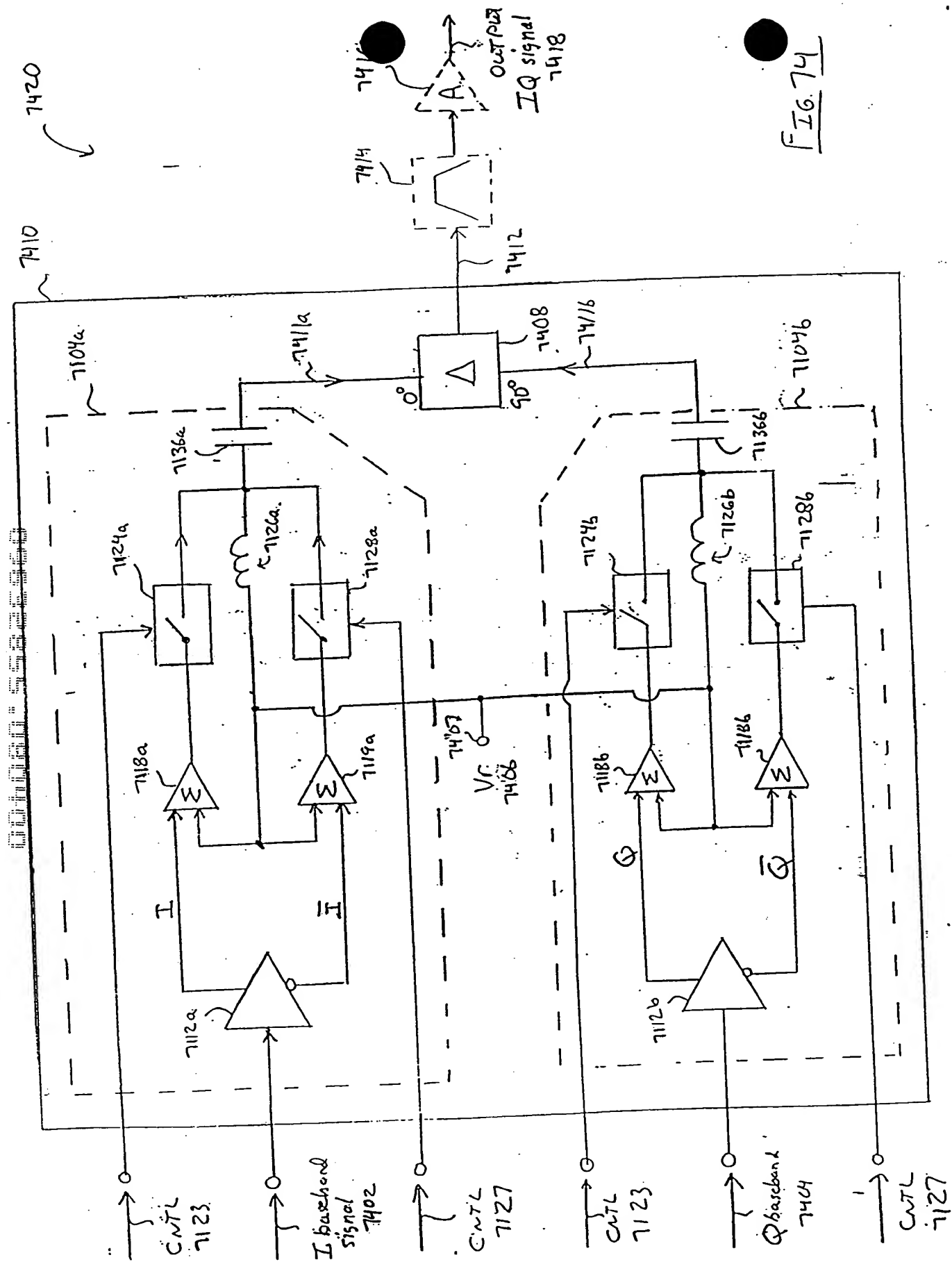


FIG. 74





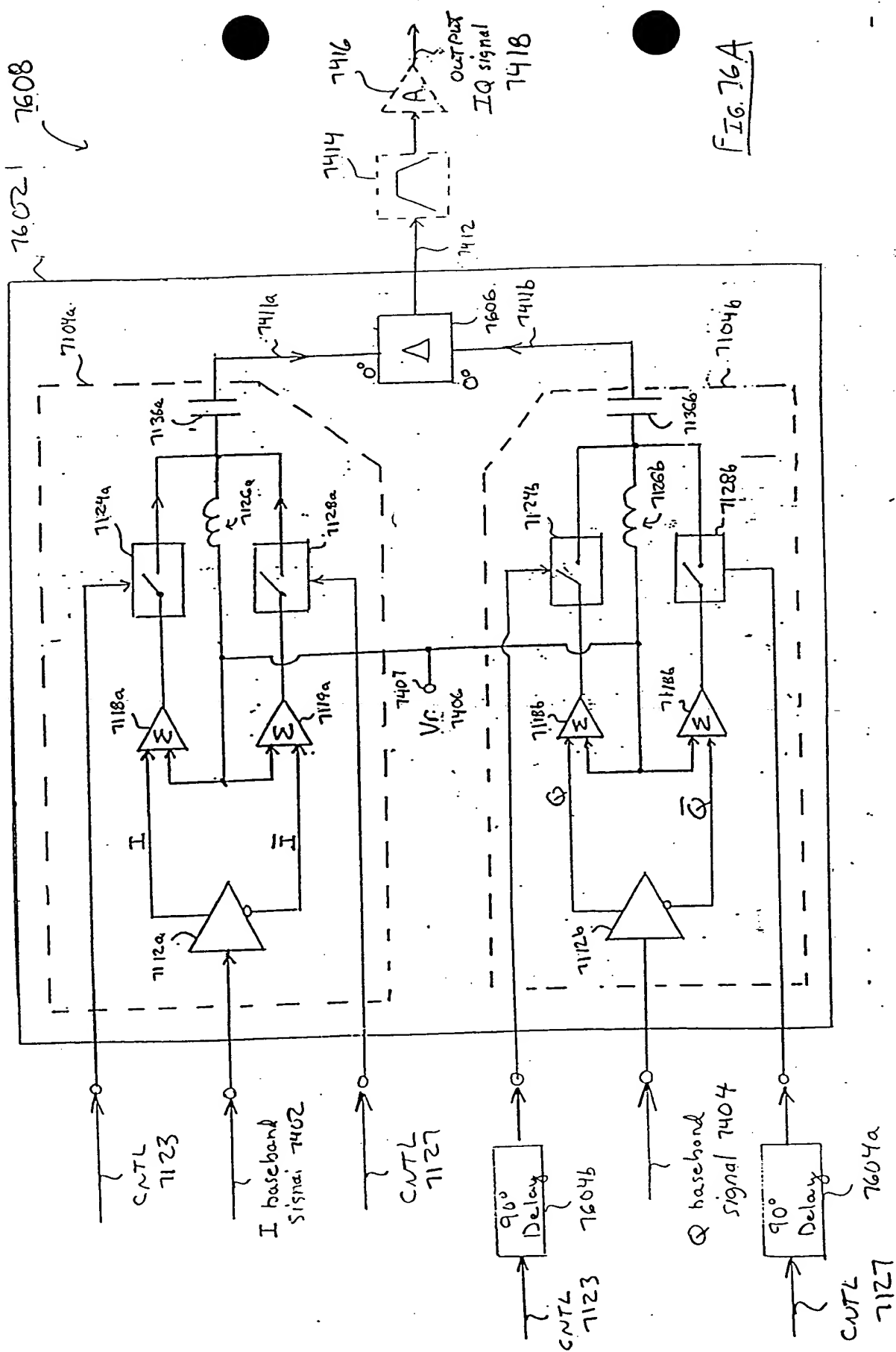
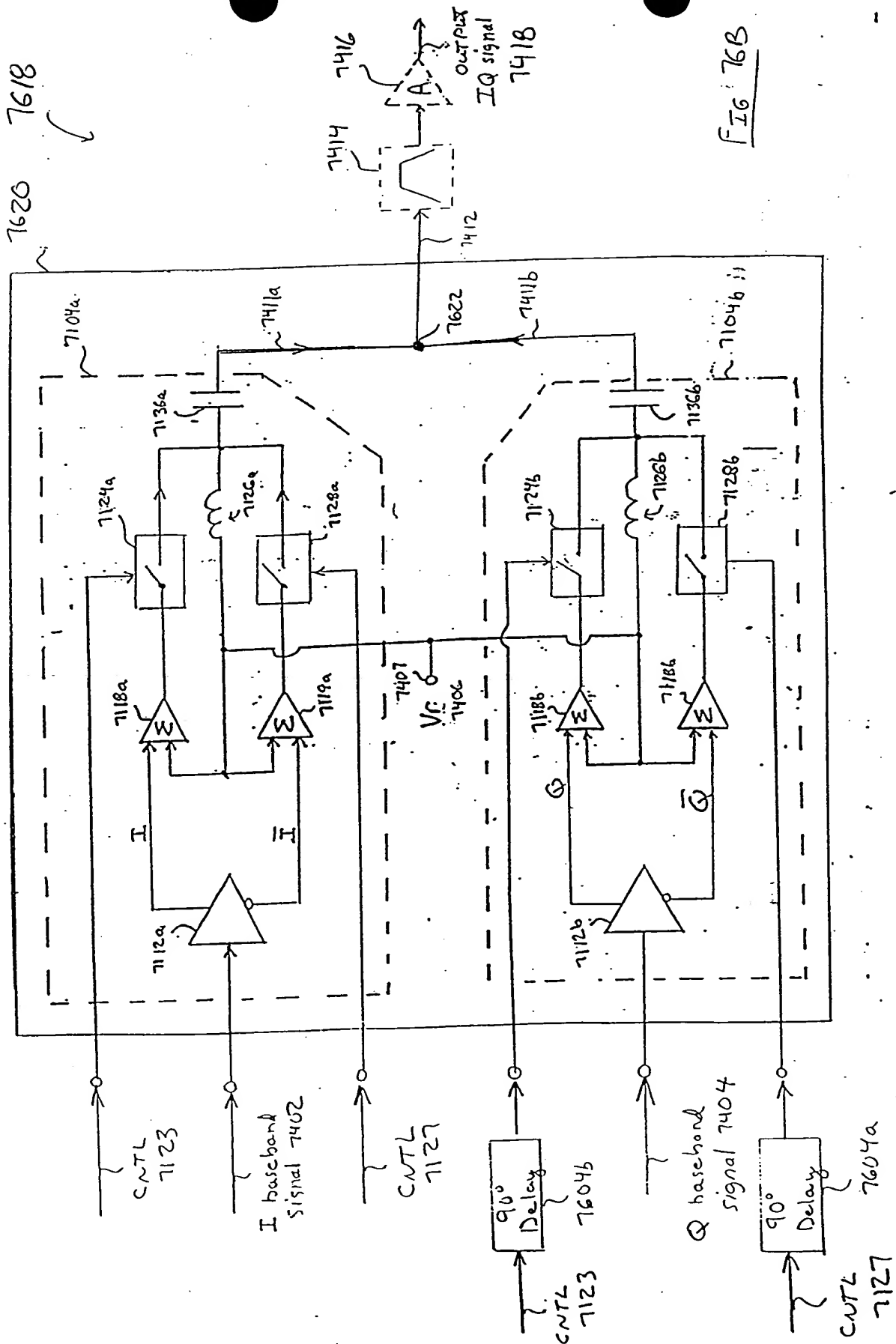


FIG. 76A

00110000 550222360



UNITED STATES

7704

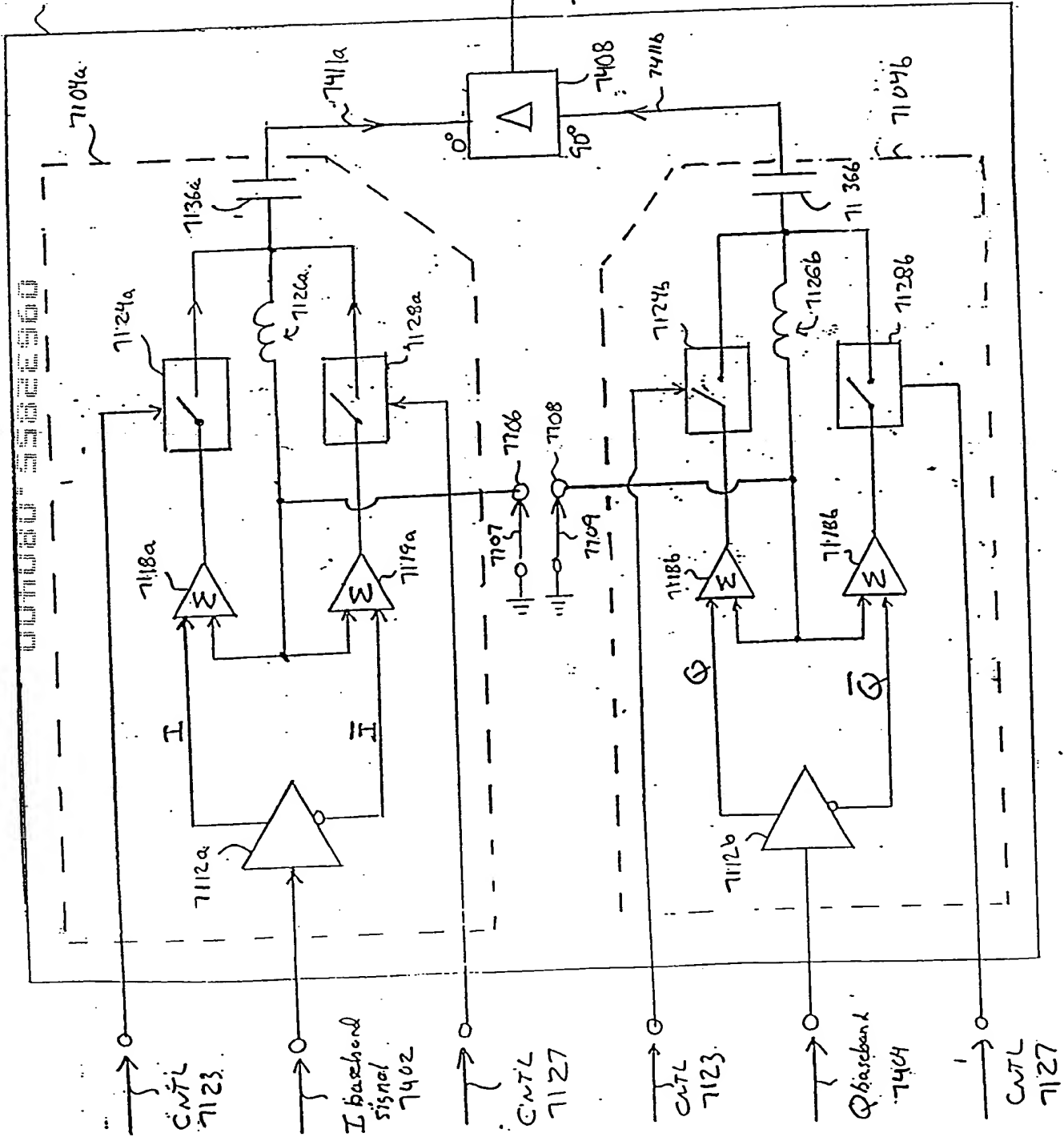


FIG. 77

000005022360

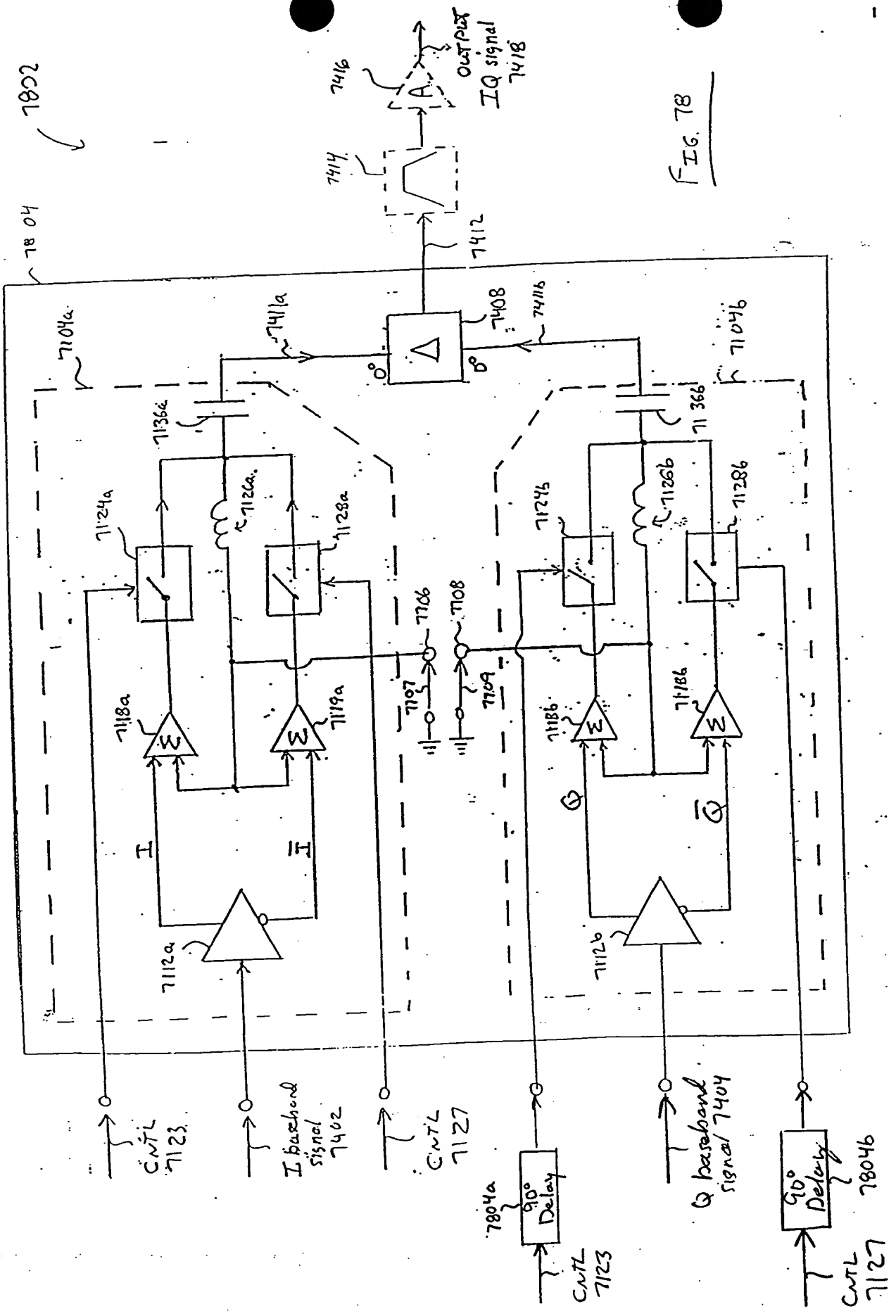
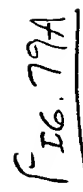


FIG. 78

7090



CNTL  
Signal  
generator

7914

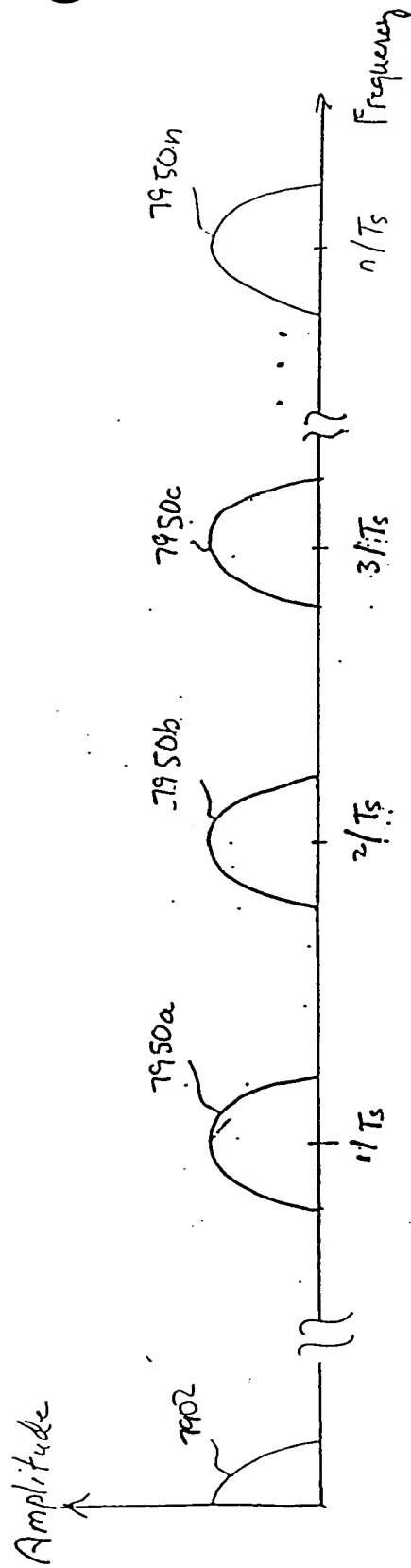


FIG. 79B

7932

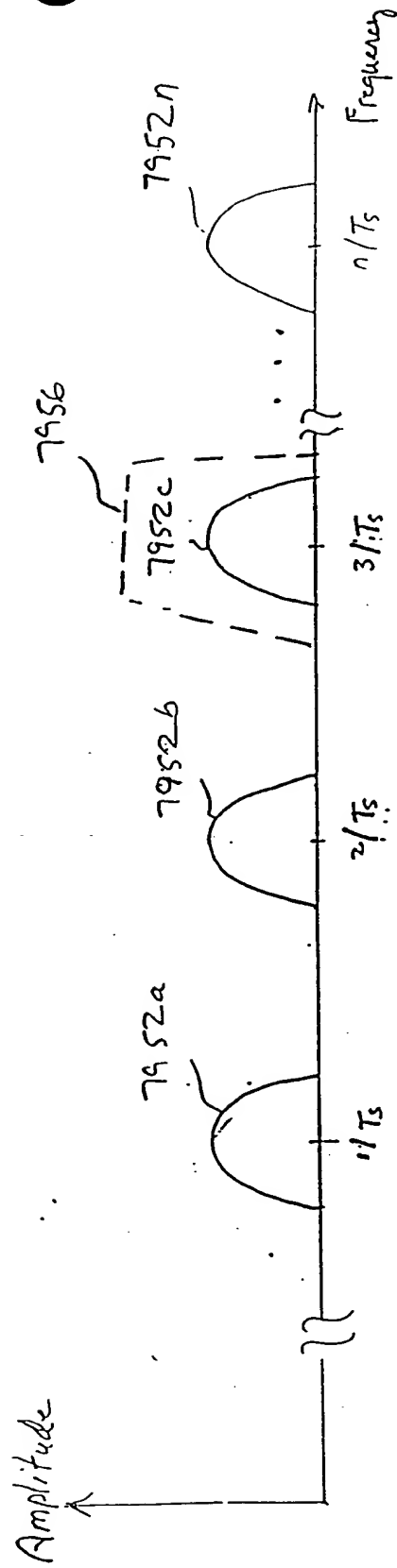


FIG. 79c

001080.55822560

7900

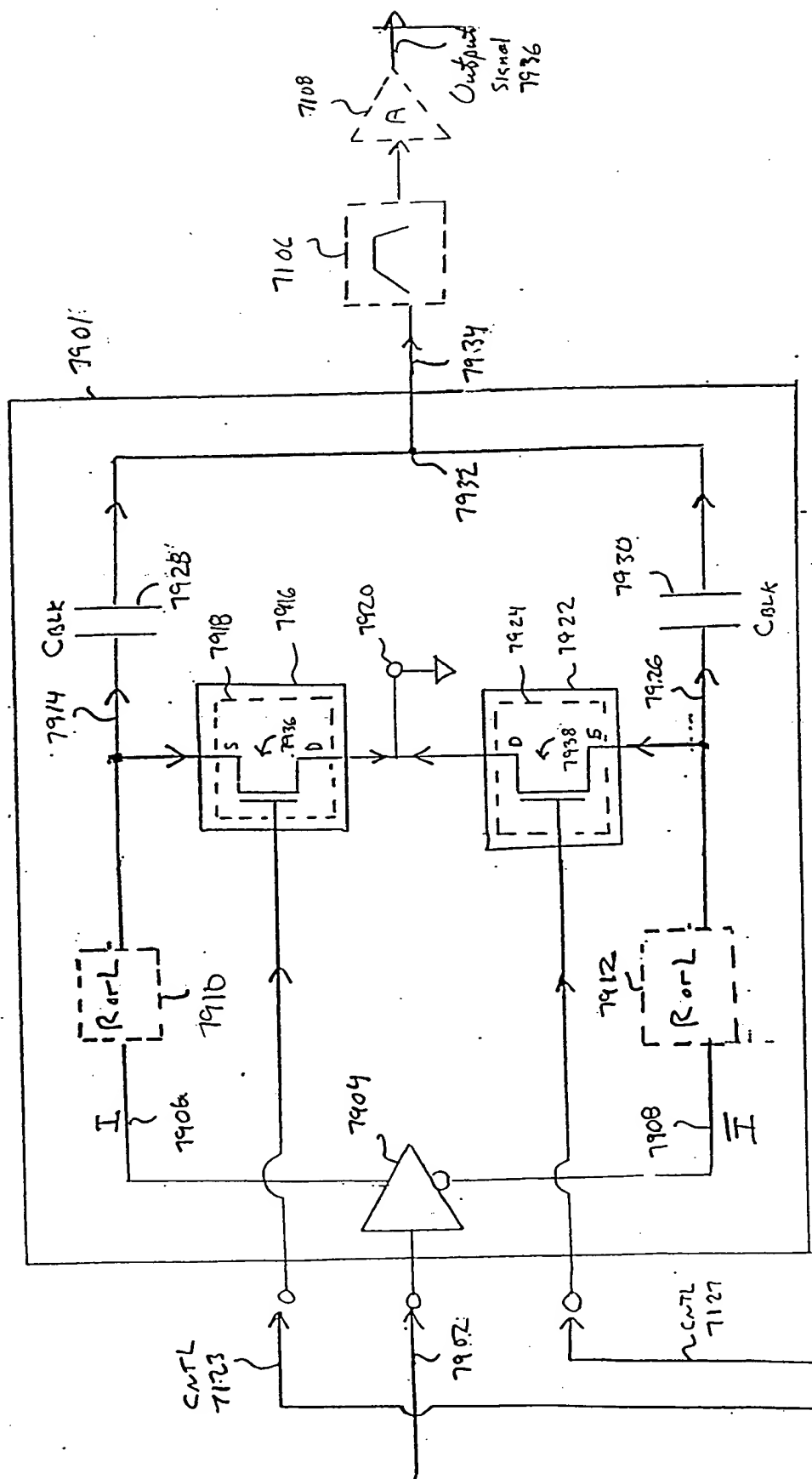


FIG. 7A

CNTL  
Signal  
generator

7142



8002

8001

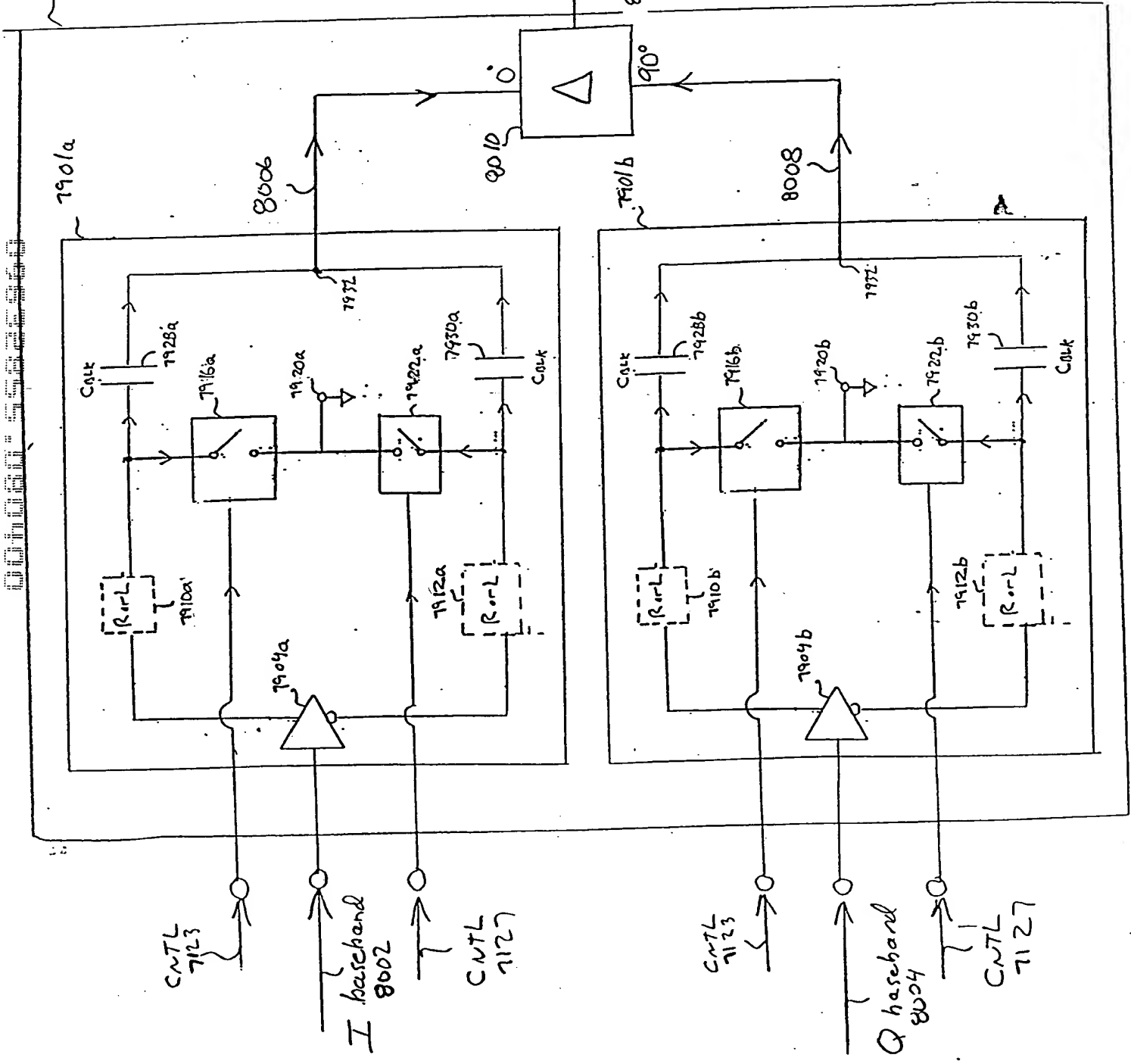
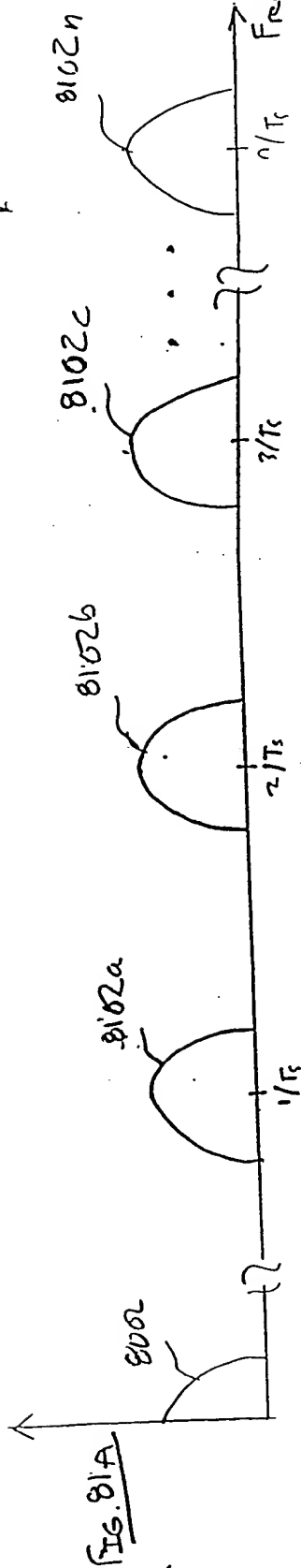
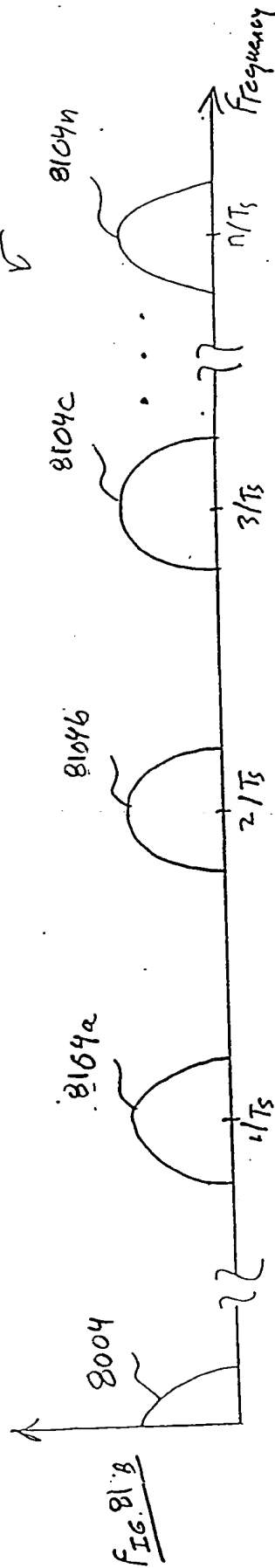


FIG. 80

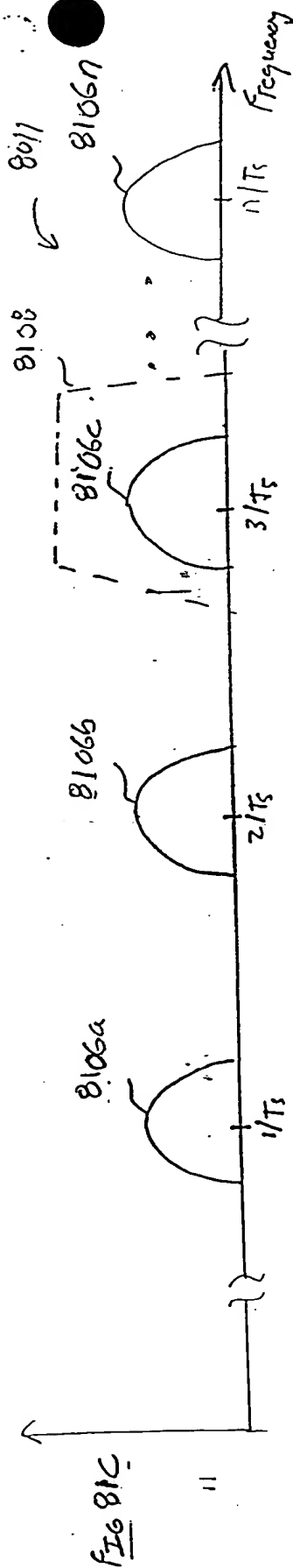
8006



8008



8010



820

8202

CNTL  
7143

I baseband  
8002

CNTL  
7127

CNTL  
7123

Q baseband  
8004

CNTL  
7127

8204b

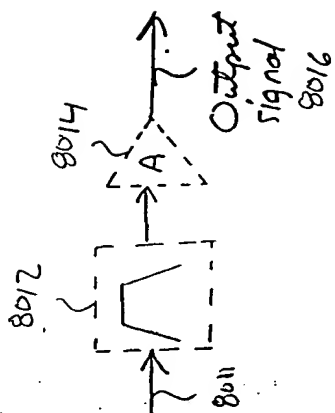
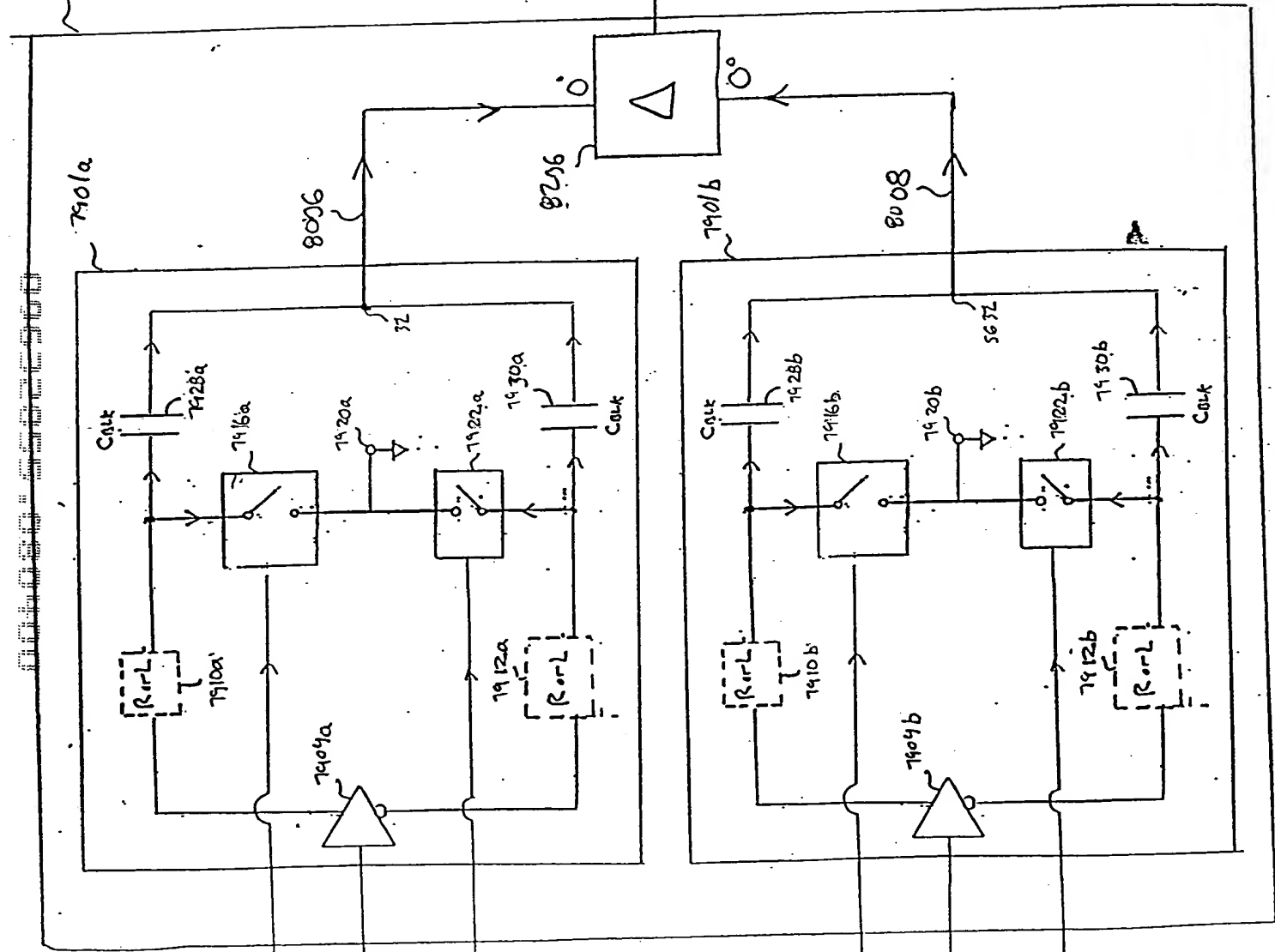


FIG. 82

000000 55555555

8300

8302

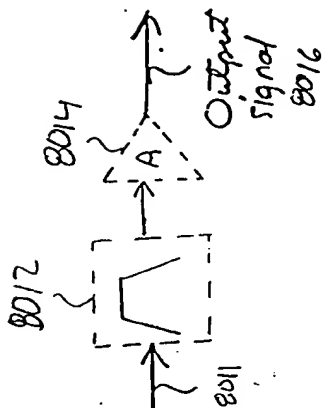
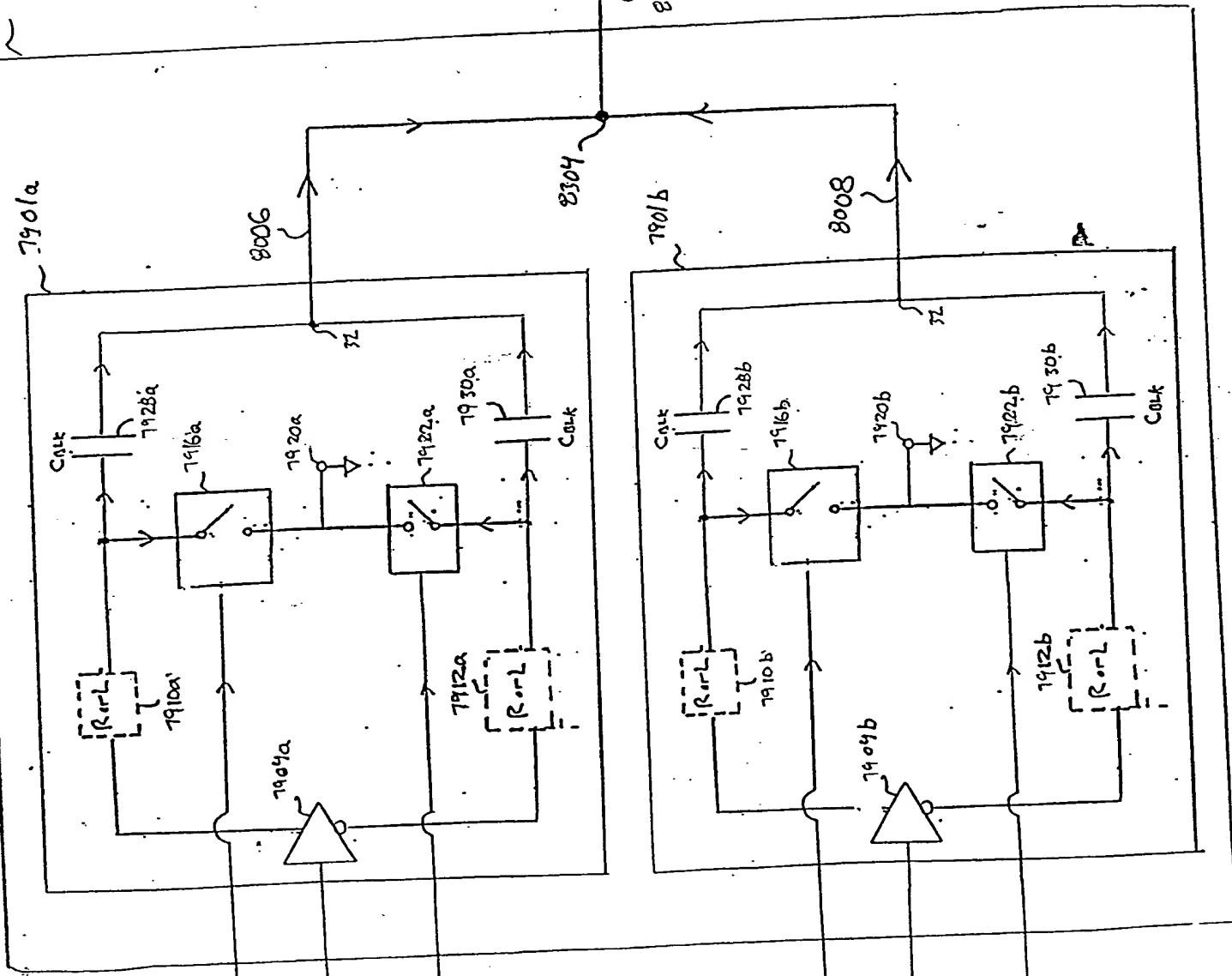


Fig. 83

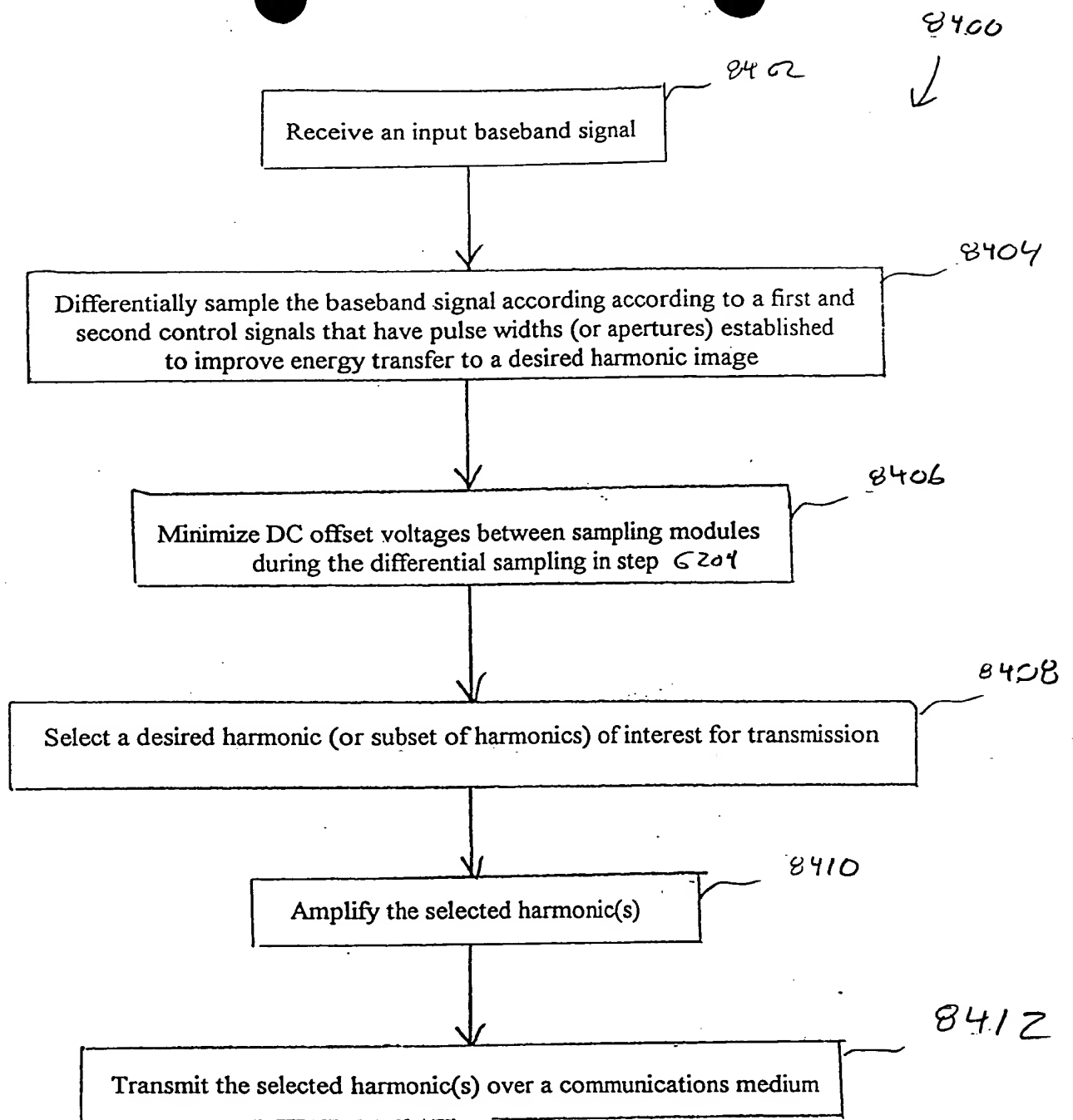


FIG. 84

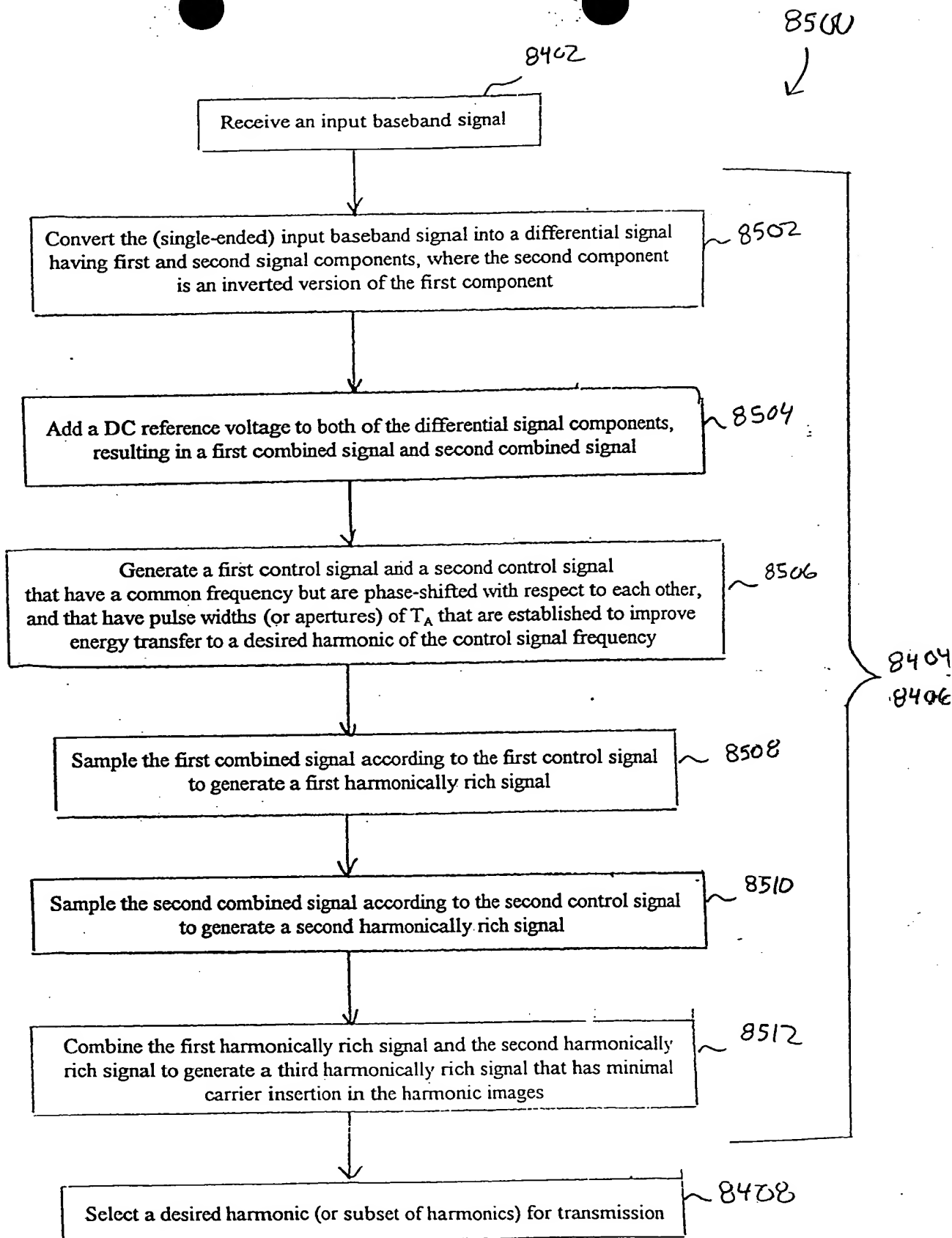
[illegible]

Fig. 85

8600

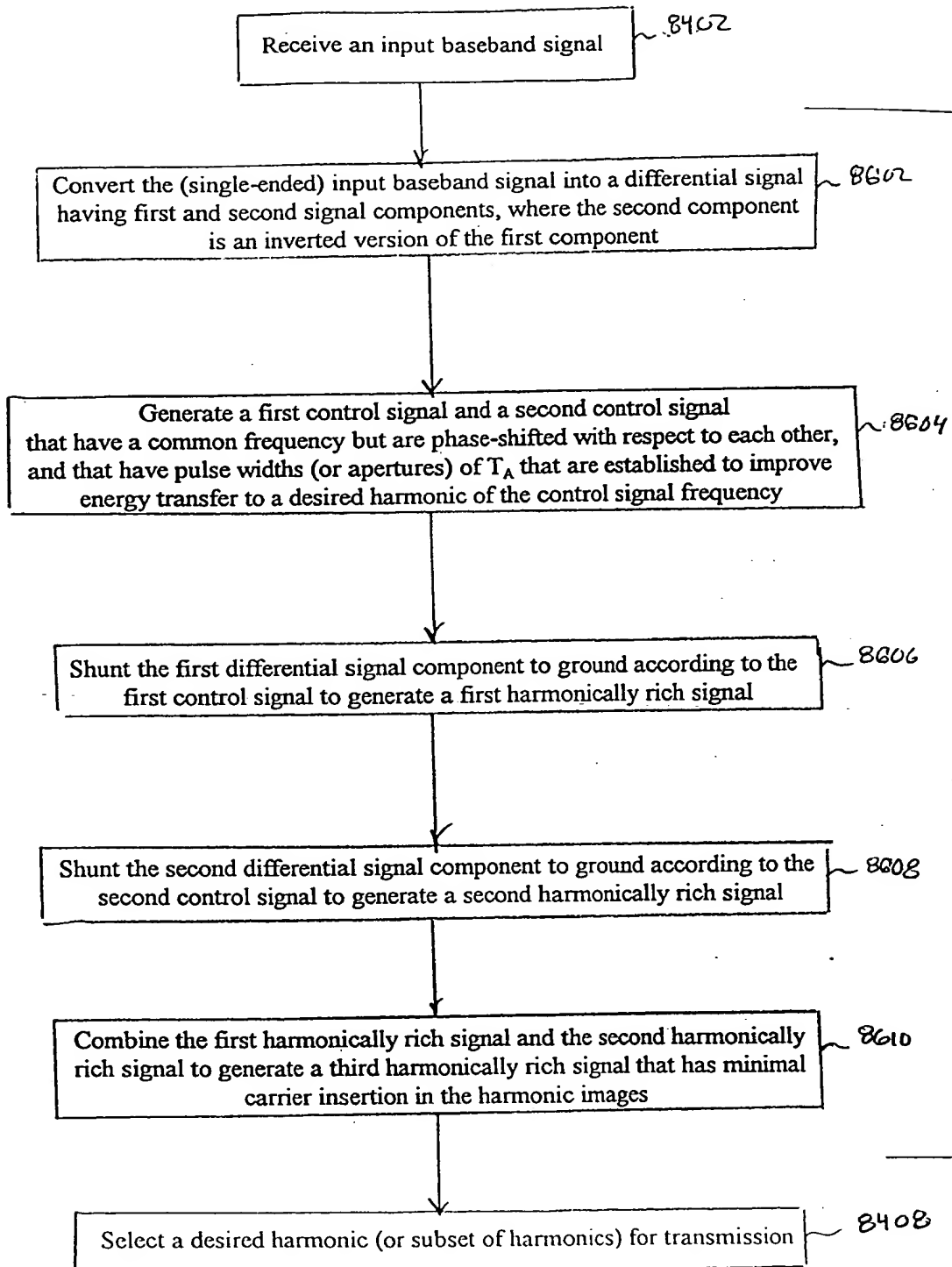


FIG. 86

✓

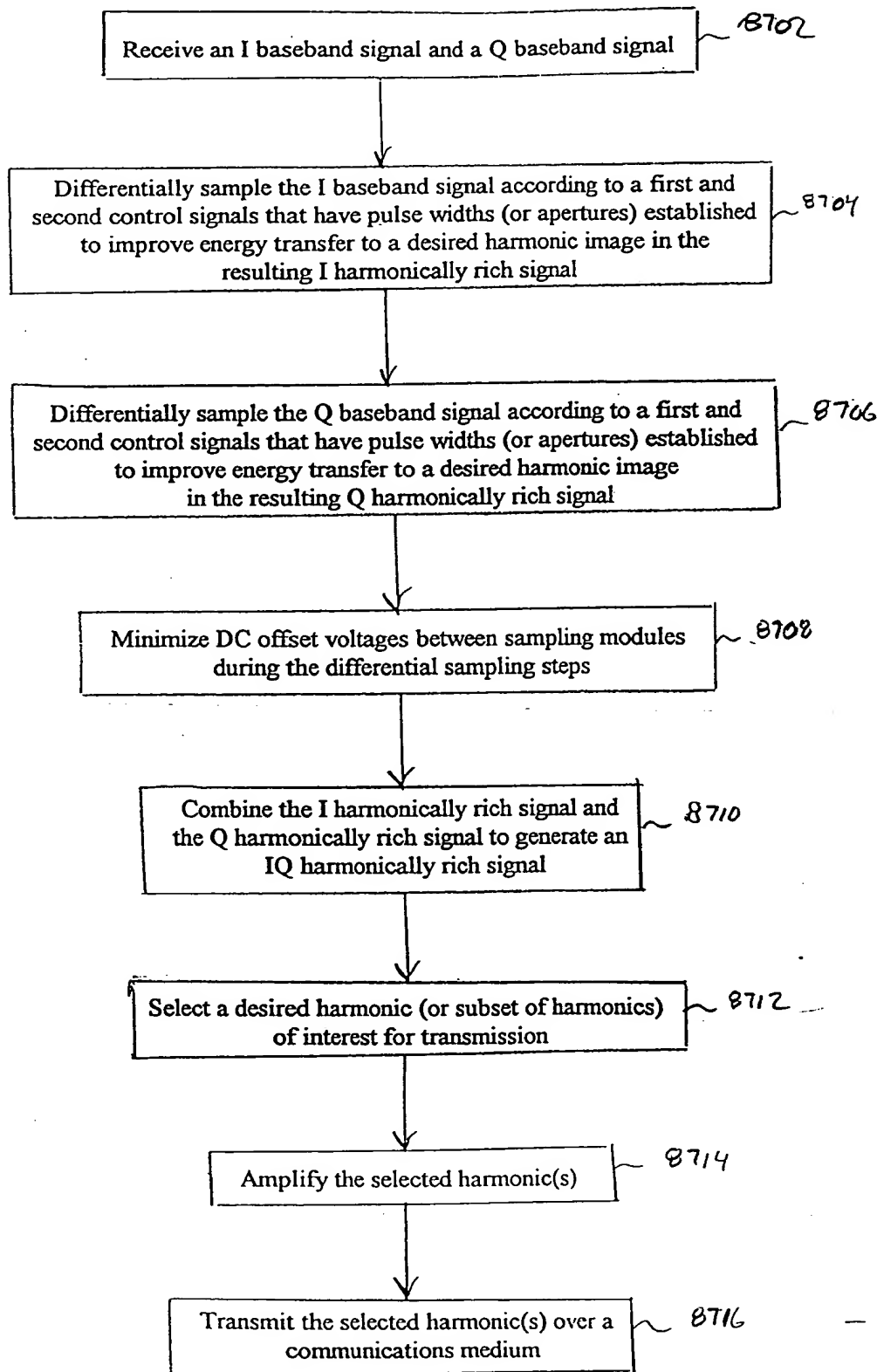
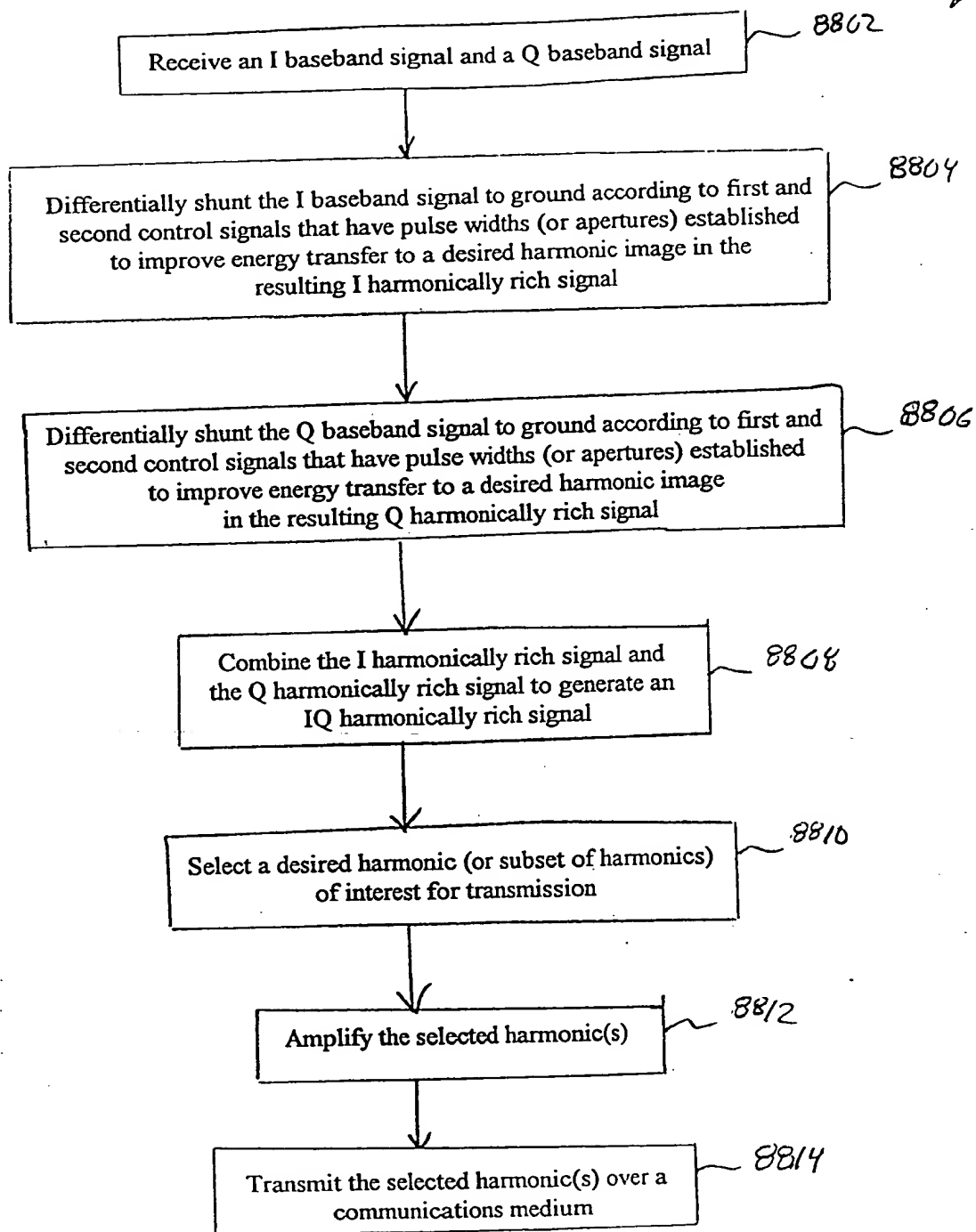


FIG. 87



FIG. 88

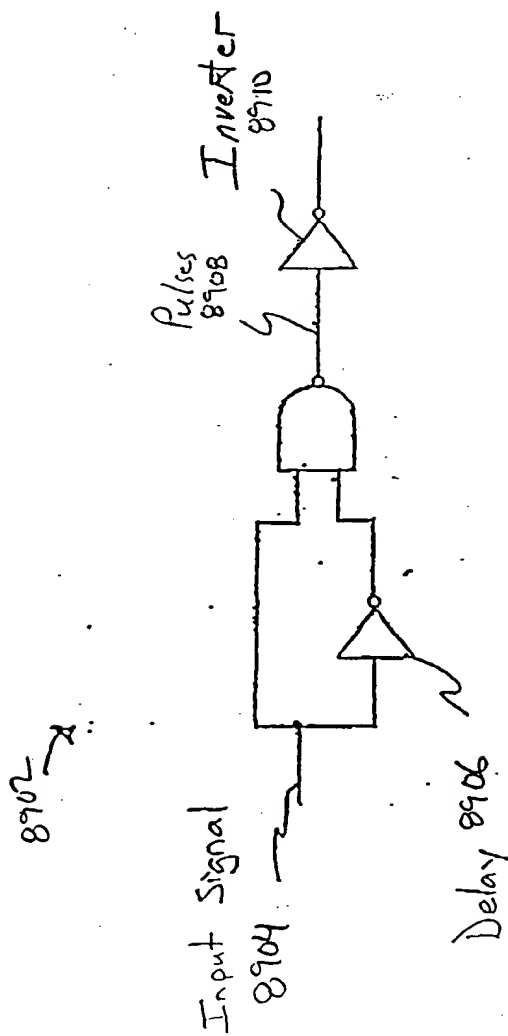


FIG. 89A

FIG. 89B

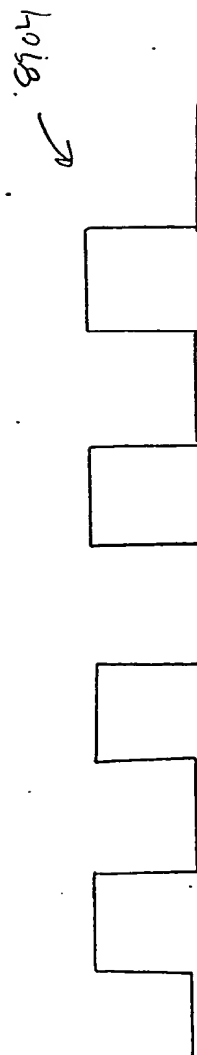
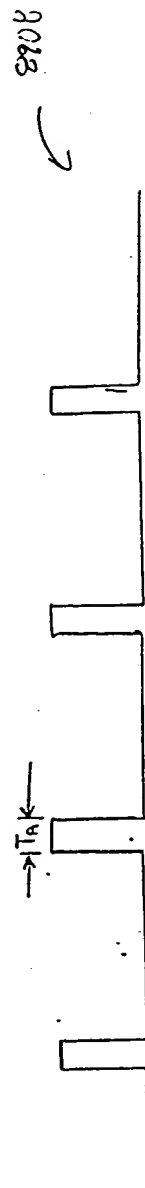


FIG. 89C



↓



8916



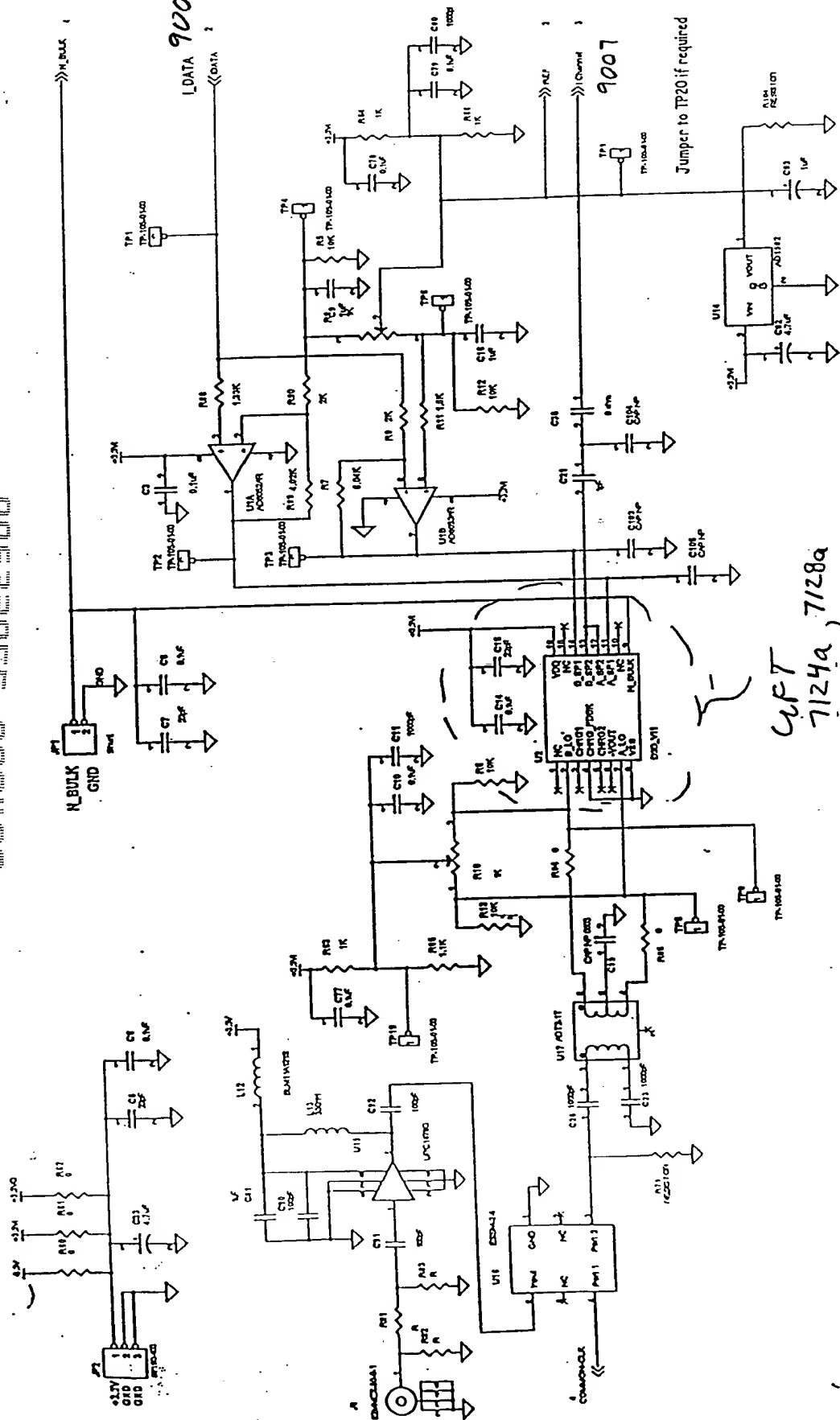
FIG. '89E

92026



FIG. 90A

001000 9006500



9007  
Jumper to TP20 if required  
I channel  
9006

UFT  
7124a, 7128a

FIG. 90B



001000:5522550

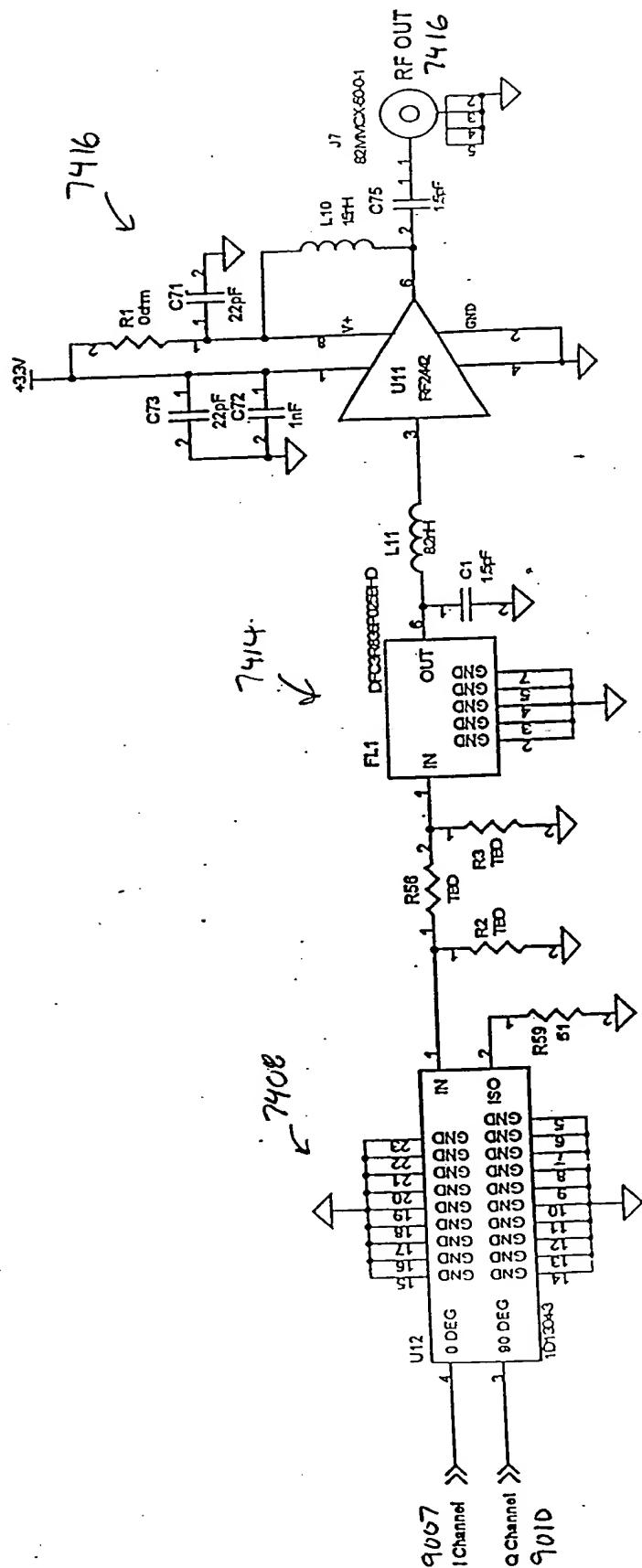


FIG. 90D

Combiner  
9012

00000 5555555

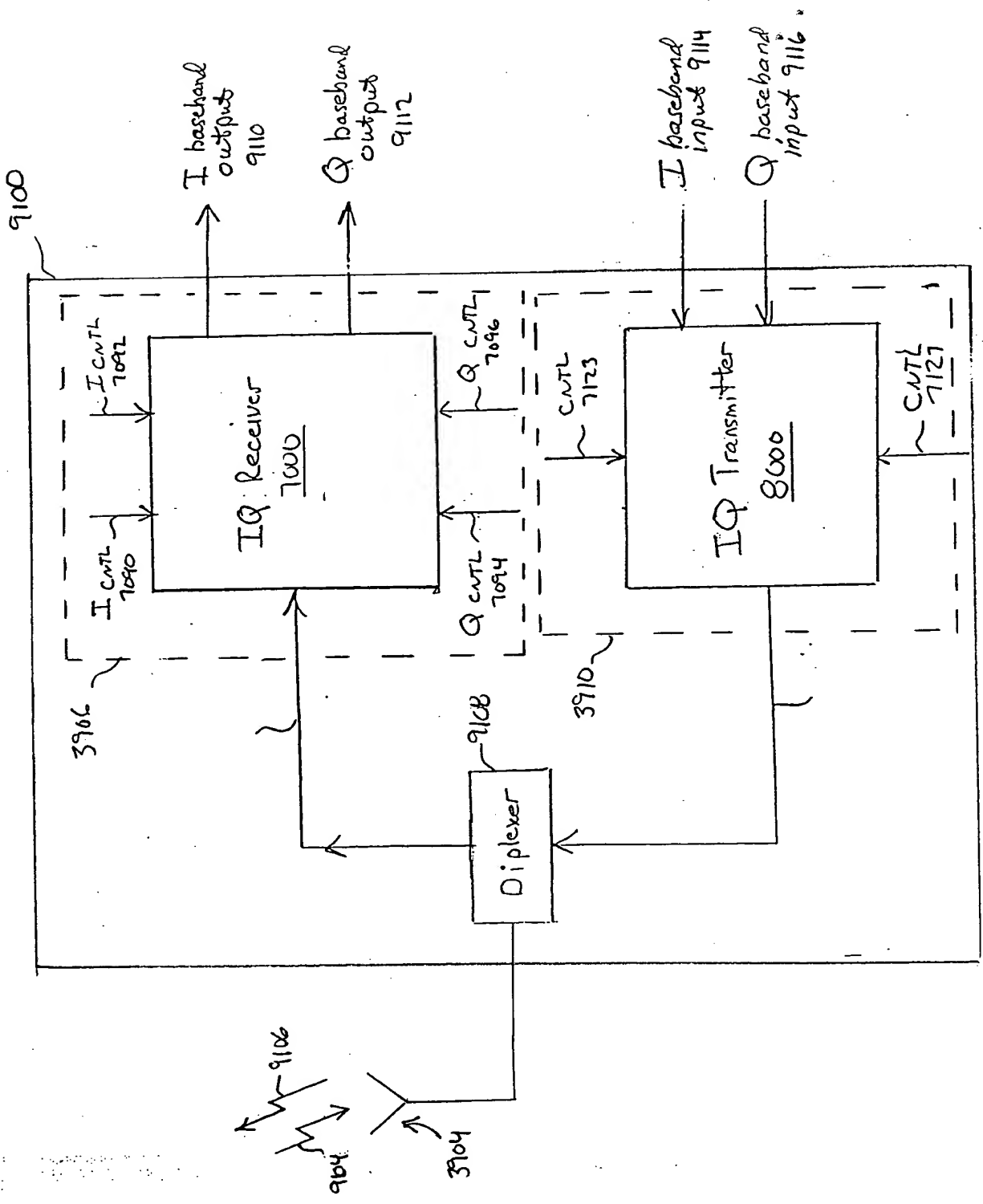


FIG. 91





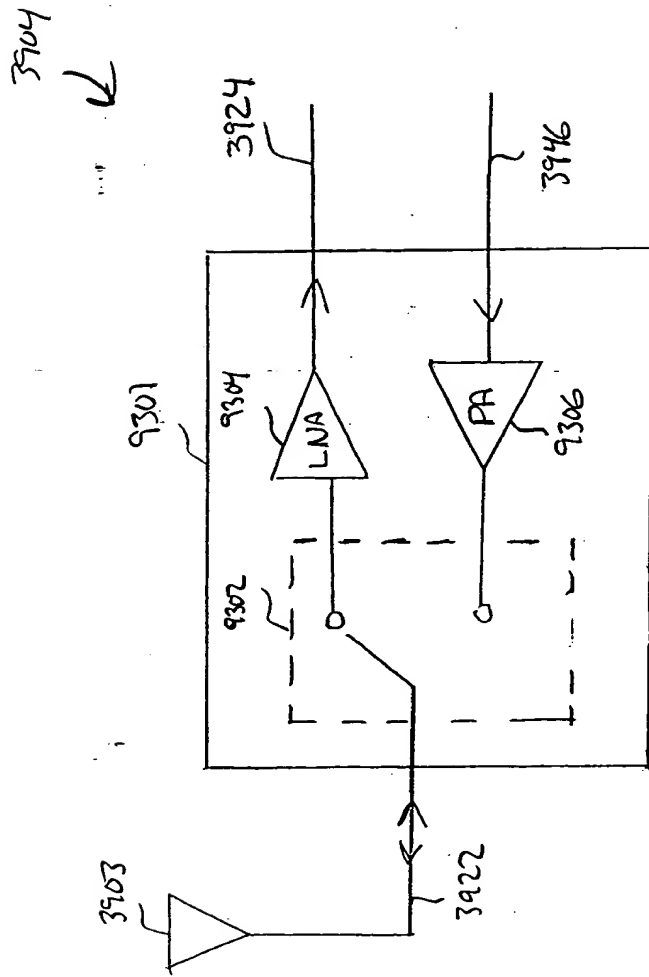
[illegible]

Fig. 93

9400

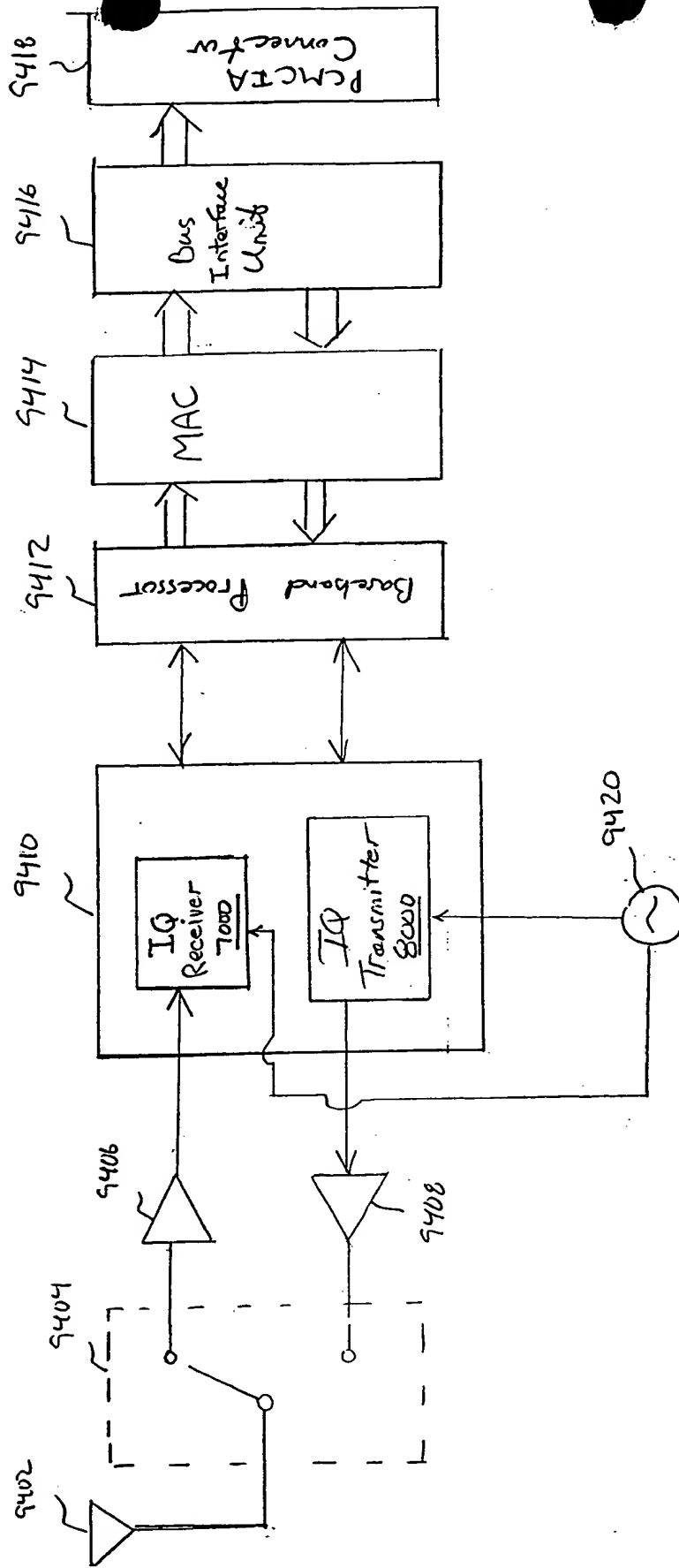


FIG. 94